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October 5, 2011

Mr. John Nohrstedt U.S. Army Corps of Engineers Engineering and Support Center, Huntsville Attn: CEHNC-FS-IS 4820 University Square Huntsville, Alabama 35816-1822

**SUBJECT:** 

Draft Final Well Decommissioning Report, Seneca Army Depot Activity, Romulus, Seneca County, New York; USACE Contract W912DY-08-D-0003, Delivery Orders 0002 and 0008 and AFCEE Contract FA8903-04-D-8675, Task Order 31, CRDL-001C

Dear Mr. Nohrstedt:

Parsons Infrastructure & Technology Group Inc. (Parsons) is pleased to submit the Draft Final Well Decommissioning Report for the Seneca Army Depot Activity in Romulus, Seneca County, New York. This work included the decommissioning of wells at 19 sites at the Depot. This work was performed in accordance with the Scope of Work for Delivery Orders 0002 and 0008 under Contract W912DY-08-D-0003.

Parsons appreciates the opportunity to provide you with the Report for this work. Should you have any questions, please do not hesitate to call me at (617) 449-1405 to discuss them.

Sincerely,

Todd Heino, P.E., Vice President

Program Manager

**Enclosures** 

cc: S. Absolom, SEDA

K. Hoddinott, USACHPPM R. Battaglia, USACE, NY

T. Battaglia, USACE, NY



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October 5, 2011

Mr. John Hill
U. S. Air Force Center for Engineering and the Environment
3515 S General McMullen, Bldg 171
San Antonio, TX 78226-2018

SUBJECT: Draft Final Well Decommissioning Report, Seneca Army Depot Activity, Romulus,

Seneca County, New York; AFCEE Contract FA8903-04-D-8675, Task Order 31,

CRDL-001C

Dear Mr. Nohrstedt:

Parsons Infrastructure & Technology Group Inc. (Parsons) is pleased to submit the Draft Final Well Decommissioning Report for the Seneca Army Depot Activity in Romulus, Seneca County, New York. This work included the decommissioning of wells at SEAD-4 (the Munitions Washout Facility and SEAD-11 (the Old Construction Debris Landfill). This work was performed in accordance with the Scope of Work under Contract FA8903-04-D-8675 Task Order 0031. Also included is a copy of the Army's Response to Comments on the Draft Well Decommissioning Report that were received from the EPA on June 28, 2011.

Parsons appreciates the opportunity to provide you with the Report for this work. Should you have any questions, please do not hesitate to call me at (617) 449-1405 to discuss them.

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Todd Heino, P.E., Vice President

Program Manager

Enclosures

cc: S. Absolom, SEDA

K. Hoddinott, USACHPPM

R. Battaglia, USACE, NY

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# **PARSONS**

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October 5, 2011

Mr. Julio Vazquez U.S. Environmental Protection Agency, Region II Superfund Federal Facilities Section 290 Broadway, 18<sup>th</sup> Floor New York, NY 10007-1866

Mr. Kuldeep K. Gupta, P.E. New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation Remedial Bureau A, Section C 625 Broadway Albany, NY 12233-7015

Mr. Mark Sergott Bureau of Environmental Exposure Investigation, Room 300 New York State Department of Health 547 River Street, Flanigan Square Troy, NY 12180

SUBJECT: Draft Final Well Decommissioning Report, Seneca Army Depot Activity, Romulus, Seneca County, New York; EPA Site ID# NY0213820830 and NY Site ID# 8-50-006

Dear Mr. Vazquez/Mr. Gupta/Mr. Sergott:

Parsons Infrastructure & Technology Group Inc. (Parsons) is pleased to submit the Draft Final Well Decommissioning Report for the Seneca Army Depot Activity in Romulus, Seneca County, New York (EPA Site ID# NY0213820830 and NY Site ID# 8-50-006). Also included is a copy of the Army's Response to Comments on the Draft Well Decommissioning Report that were received from the EPA on June 28, 2011.

Should you have any questions, please do not hesitate to call me at (617) 449-1405 to discuss them.

Sincerely,

Todd Heino, P.E., Vice President

Program Manager

Enclosures

cc: M. Heaney, TechLaw J. Nohrstedt, USACE, Huntsville S. Absolom, SEDA K. Hoddinott, USACHPPM R. Battaglia, USACE, NY T. Battaglia, USACE, NY

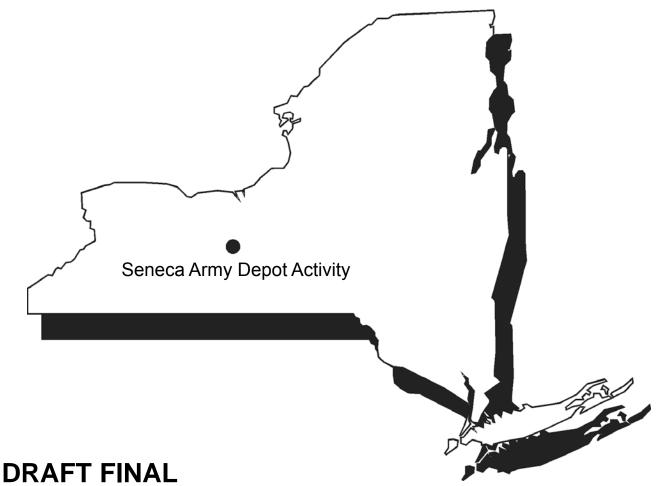
# US Army, Engineering & Support Center Huntsville, AL



01691



Seneca Army Depot Activity Romulus, NY



# WELL DECOMMISSIONING REPORT

ASH LANDFILL OPERABLE UNIT, SEAD-4, SEAD-5, SEAD-11, SEAD-12, SEAD-13, SEAD-24, SEAD-25, SEAD-26, SEAD-27, SEAD-48, SEAD-59, SEAD-63, SEAD-67, SEAD-70, SEAD-71, SEAD-119B, SEAD-121C, & SEAD-122B SENECA ARMY DEPOT ACTIVITY

Contract No. W912DY-08-D-0003 Task Order No. 0008 EPA Site ID# NY0213820830 NY Site ID# 8-50-006

**PARSONS** 

OCTOBER 2011

#### **DRAFT FINAL**

#### WELL DECOMMISSIONING REPORT

# SENECA ARMY DEPOT ACTIVITY ROMULUS, SENECA COUNTY, NEW YORK

### Prepared for:

# U.S. ARMY CORPS OF ENGINEERS, ENGINEERING AND SUPPORT CENTER HUNTSVILLE, ALABAMA

# U.S. AIR FORCE CENTER FOR ENGINEERING AND THE ENVIRONMENT BROOKS CITY BASE, TEXAS

and

# SENECA ARMY DEPOT ACTIVITY ROMULUS, NEW YORK

Prepared by:

#### **PARSONS**

100 High Street Boston, MA 02110

USAESCH Contract Number W912DY-08-D-0003 Task Order No. 0003 & 0008 AFCEE Contract Number FA8903-04-D-8675 Task Order No. 31 CDRL A001D EPA Site ID# NY0213820830 NY Site ID# 8-50-006

October 2011

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#### 1.0 INTRODUCTION

This report documents the decommissioning of 146 groundwater monitoring wells located at the former Seneca Army Depot Activity (SEDA or the Depot) in Seneca County, New York (EPA CERCLIS Site ID: NY0213820830; NYS Inactive Waste Site ID: 8-50-006). The monitoring wells were decommissioned because they are no longer needed for long-term monitoring or continuing environmental sampling and analysis purposes associated with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or State of New York Inactive Hazardous Waste Site investigations and studies that continue at the former Depot as the Army fulfills its federal and state environmental assessment, remediation, and long-term monitoring obligations. SEDA was listed as a Federal Facility on the National Priorities List (NPL) in August of 1990, and since its listing, the Army has worked to identify and quantify the levels of environmental contamination that are present, and when determined to be necessary, remediate identified contamination to mitigate or eliminate potential risks and hazards to the public and environment that may be associated with its presence in the media at, and in the vicinity, of the Depot. Under this work, the Army has conducted environmental assessments and evaluations at 112 known or suspected areas of concern (AOCs) located within the bounds of the Depot. As a result of these assessments and evaluations, 27 suspected AOCs were eliminated from further study and analysis, with oversight agency concurrence and approval, after initial assessments and evaluations indicated that suspected contaminants were not present at levels that posed unacceptable levels of threats or risk. The remaining 76 AOCs were assessed under the CERCLA and other aligned regulatory programs, and findings and conclusions of these assessments have led to remedial action decisions that have been documented in Records of Decision (RODs) that have been approved by, or gained concurrence of, oversight regulatory agencies. Of the AOCs processed to RODs, 30 required no action (NA), 17 required no further action (NFA) once interim actions were completed, and the remaining 29 AOCs are subject to land use controls (LUCs) or other continuing regulatory requirements. Long-term groundwater monitoring required under approved RODs is continuing at four AOCs (SEAD-16, former Abandoned Deactivation Furnace Site; SEAD-17, former Existing Deactivation Furnace Site; SEAD-23, former Open Burning [OB] Grounds; and, SEAD-25, former Fire Training and Demonstration Pad) and one operable unit (the Ash Landfill Operable Unit, SEADs 3, 6, 8, 14 and 15). Environmental assessments and final regulatory action and approval are still pending at the remaining nine AOCs.

The decommissioning of the monitoring wells was performed in accordance with the U.S. Army's (Army's) August 2010 Work Plan titled *Well Decommissioning Plan for SEAD-4*, *SEAD-5*, *Ash Landfill Operable Unit*, *SEAD-11*, *SEAD-12*, *SEAD-13*, *SEAD-24*, *SEAD-25*, *SEAD-26*, *SEAD-27*, *SEAD-48*, *SEAD-59*, *SEAD-63*, *SEAD-67*, *SEAD-70*, *SEAD-71*, *SEAD-119B*, *SEAD-121C*, *and SEAD-122B*, *Seneca Army Depot Activity* (Parsons, 2010). The Work Plan was prepared based on the procedures and recommendations provided in New York State Department of Environmental Conservation's (NYSDEC's) Draft guidance titled *Groundwater Monitoring Well Decommissioning* issued January 8, 2009. The well decommissioning was performed on behalf of the U.S. Army, Seneca Army Depot Activity under Contracts issued by U.S. Army, Engineering and Support Center, Huntsville (USAESCH – W912DY-08-D-0003, Task Orders 2, and 8) and the U.S. Air Force Center

for Engineering and the Environment (AFCEE – FA8903-04-D-8675, Task Order 31) by Parsons Infrastructure & Technology Group Inc. (Parsons) and GeoLogic NY, Inc. Well decommissioning completed at SEAD-4 and SEAD-11 was conducted under work authorized under AFCEE's Contract FA8903-04-D-8675, Task Order 31, while the decommissioning activities completed at SEAD-13 were performed under work authorized under USAESCH's Contract W912DY-08-D-0003, Task Order 2. Well decommissioning activities completed at all of the other sites were performed under work authorized under USAESCH's Contract W912DY-08-D-0003, Task Order 8.

Wells decommissioned under this work were located at 24 former solid waste management units (SWMU) or AOCs within the Depot. SWMU/AOC descriptions corresponding to the SEAD designations are identified below, along with a brief description of the site's current regulatory status:

- SEAD-3, 6, 8, 14 and 15: The Ash Landfill Operable Unit approved ROD; LUCs and long-term monitoring groundwater monitoring required at designated wells.
- SEAD-4/38: The Munitions Washout Facility/ Building 2079 Boiler Blow Down Pit approved ROD; NFA with release of land for unrestricted use and unlimited exposures, no required groundwater monitoring.
- SEAD-5: Former Sludge Waste Piles approved ROD; LUCs required, no required groundwater monitoring.
- SEAD-11: Old Construction Debris Landfill approved ROD; NFA with release of land for unrestricted use and unlimited exposures, no required groundwater monitoring.
- SEAD-12: Radioactive Waste Burial Sites regulatory status pending, but no long-term groundwater monitoring anticipated necessary.
- SEAD-13: Inhibited Red Fuming Nitric Acid (IRFNA) Disposal Site approved ROD; LUCs required, no required groundwater monitoring.
- SEAD-24: Abandoned Powder Burning Pit approved ROD; NFA with release of land for unrestricted use and unlimited exposures, no required groundwater monitoring required.
- SEAD-25: The Fire Training and Demonstration Pad approved ROD; LUCs and long-term groundwater monitoring required at designated wells.
- SEAD-26: The Fire Training Pit and Area approved ROD; LUCs required, no required continuing long-term groundwater monitoring.
- SEAD-27: Steam Cleaning Waste Tank in Building 360 approved ROD; LUCs required, no required groundwater monitoring.
- SEAD-48: Row E0800 Pitchblende Ore Storage Igloos approved ROD; NFA with land released for unrestricted use and unlimited exposures, no groundwater monitoring required.
- SEAD-59: Fill Area West of Building 135 approved ROD; LUCs required no required groundwater monitoring.

- SEAD-63: Miscellaneous Components Burial Site approved ROD; NFA with release for land for unrestricted use and unlimited exposures, no groundwater monitoring required.
- SEAD-67: Dump Site east of Sewage Treatment Plant No. 4 approved ROD; LUCs required no required groundwater monitoring.
- SEAD-70: Fill Area Adjacent to Building T-2110 regulatory status pending, but no long-term groundwater monitoring anticipated.
- SEAD-71: Alleged Paint Disposal Area approved ROD; LUCs required no required groundwater monitoring.
- SEAD-119B: Former Small Arms Range at the Lake Housing Area NA, not a site of interest, no required groundwater monitoring.
- SEAD-121C: Defense Reutilization and Marketing Office (DRMO) Yard approved ROD; LUCs required, no required groundwater monitoring.
- SEAD-122B: Small Arms Range at the Airfield Parcel approved ROD; LUCs required, no required groundwater monitoring.

The locations of the affected SEADs are shown on **Figure 1.** Wells decommissioned under this work were either not needed, or designated by the Army as being unlikely to be needed, for continuing monitoring of groundwater quality or conditions at sites where they were installed. Wells designated for decommissioning at SEAD-25 and the Ash Landfill Operable Unit (SEADs 3, 6, 8, 14, & 15) are not included amongst the wells that have been included in the continuing long-term monitoring programs implemented and continuing at these sites. The Army does not anticipate that long-term groundwater monitoring will be required at SEAD-12 or SEAD-70, as past investigations and studies have not suggested that groundwater quality is of concern at either of these sites; however, if future monitoring of groundwater is required at one or both of these sites, once proposed plans or RODs are negotiated and finalized, then new wells will be installed as needed to satisfy the requirements of the defined groundwater monitoring program.

A complete list of the groundwater wells decommissioned at each SWMU/AOC and data documenting their former location is provided in **Table 1-1**. Additional information pertinent to the decommissioning method is also summarized in the table.

#### 2.0 AREA OF CONCERN DESCRIPTION AND STATUS

Specific information pertinent to the environmental conditions at the former SWMU/AOCs where groundwater monitoring wells were decommissioned are presented below, along with summaries of any submitted reports and the proposed or approved plans for each.

### SEADs 3, 6, 8, 14 and 15: The Ash Landfill Operable Unit

The Ash Landfill Operable Unit is located in the west-central portion of the Depot and encompasses an area of approximately 46.7 acres. From 1941 to 1974, uncontaminated trash was burned in a series of burn pits near the former incinerator building (Building 2207). Building 2207 was demolished in 2007. According to a U.S. Army Environmental Hygiene Agency (USAEHA) Interim Final Report, Groundwater Contamination Survey No. 38-26-0868-88 (USAEHA, 1987), the ash from the refuse burning pits was buried in the Ash Landfill (SEAD-6) from 1941 until the late 1950s or early 1960s. According to an undated aerial photograph of the incinerator during operation, the active area of the Ash Landfill extended at least 500 feet north of the incinerator building, near a bend in a dirt road. A fire destroyed the incinerator on May 8, 1979, and the landfill was subsequently closed. Post-closure, the landfill was apparently covered with native soil of various thicknesses, but was not closed with an engineered cover or cap. Other areas at the site were used as a grease pit and for burning debris, and for the burial of non-combustible materials at a site on the south and west sides of the intersection of Smith Farm and North South Base Line roads.

Site investigations of the Ash Landfill identified a groundwater plume comprised primarily of chlorinated VOCs including trichloroethene and its daughter degradation products (dichloroethenes and vinyl chloride) in the shallow aquifer beneath the site and indicated that it was migrating towards the boundary of the Depot. The Army conducted an interim remedial measure in 1998 in which a 650-foot long permeable reactive wall containing zero-valence reactive iron granules was installed near the Depot's fence line to intercept the identified plume. The wall was installed as a demonstration program to show that the reactive wall could be effective in reducing concentrations of chlorinated ethenes through reactive dechlorination.

As such, the ROD for the Ash Landfill (Parsons, 2005a) required the installation of three in-situ permeable reactive barrier walls, and maintenance of the proposed walls and the existing wall for migration control of the groundwater plume. Further within the final *Remedial Design Report for the Ash Landfill Operable Unit* (Parsons, 2006a) the Army indicated that groundwater monitoring, including plume monitoring and biowall performance monitoring, would be performed as part of the Ash Landfill OU post-closure operations. Performance monitoring was required to measure groundwater contaminant concentrations and the effectiveness of the reactive barrier walls remedy for the Ash landfill OU. Monitoring wells currently being sampled as part of the continuing long-term monitoring (LTM) program at the Ash Landfill OU include MW-56, MWT-22, MWT-23, MWT-24, MWT-25, MWT-26, MWT-27, MWT-28, MWT-29, MWT-7, PT-17, PT-18A, PT-22, and PT-24. Four additional wells (i.e., MW-48, MW-60 PT-16, and PT-20) were retained for groundwater elevation contour map purposes, while MW-58D was retained as it has USGS monitoring equipment

currently installed within it. Other wells at the site are no longer needed and were scheduled for decommissioning.

The locations of monitoring wells decommissioned at the Ash Landfill are shown on **Figure 2**.

## SEAD-4/38: The Munitions Washout Facility/Building 2079 Boiler Blow Down Pit

The SEAD-4 site consists of two parcels of land that encompass approximately 47.5 acres that sit on opposite sides of Seneca Road in the southwestern portion of the former Depot. The portion of SEAD-4 located to the north and east of Seneca Road sits atop and on the southwestern face of a downwardly sloping hill that flattens out near Seneca Road. This portion of SEAD-4 previously contained numerous paved and dirt access roads, several buildings, assorted out structures, and manmade drainage ditches once associated with the former Munitions Washout operations, many of which have now been demolished and removed. One of the buildings previously located within the northern portion of SEAD-4 was Building 2079, which was a boiler house that was used to produce steam in support of SEAD-4's munitions washout operations. Building 2079 was demolished by the Army in 2007. Prior to 1980, boiler blow down liquids were discharged into an earthen pit outside of Building 2079, where they were allowed to infiltrate into the ground or flow over the surface until they were captured in SEAD-4's drainage ditches. The location where the boiler blow down liquid was discharged outside of Building 2079, which is fully surrounded by the greater area of SEAD-4, was designated by the Army as SEAD-38.

The southwestern portion of SEAD-4 is and has predominantly been undeveloped over time. Unoccupied closed buildings and building remnants are located adjacent to the southwestern edge of Seneca Road, but these give way to unoccupied and undeveloped areas as one crosses this portion of the site from Seneca Road to the railroad line that bounds the site to the west. Numerous earthen drainage ditches lead to the south and west towards the location of a former lagoon that once was located in this portion of the site, but which was drained and removed during the soil excavation and disposal remedial action conducted at this AOC.

The approved ROD for SEAD-4/38 (Parsons, 2008b) required the excavation and off-site disposal of soil, ditch soil, and lagoon soil that were contaminated with concentrations of select metals (e.g., chromium, lead, vanadium) that posed potential risk to certain ecological receptors. As part of the remedial action, the former on-site lagoon was dewatered to facilitate the excavation of the contaminated lagoon soil, and once the contaminated lagoon soil was removed, the location of the lagoon was regraded to promote positive flow away from its former location. Other excavation areas that could not be graded to promote positive drainage or that were more than 4 feet in depth near the

<sup>&</sup>lt;sup>1</sup> Boiler blow down is a maintenance operation used to reduce scale buildup resulting from mineral deposits within boiler pipes where water is converted to steam. Minerals contained within the boiler feed water do not vaporize along with the water and deposit in the boiler tube, producing scale that reduces the efficiency of the boiler operation and which can cause corrosion or clogging of the pipes. Blowdown liquids are used to lift the scale deposits and flush them out of the system.

road or site buildings were backfilled with clean fill. Backfill used was chemically characterized and the analytical results were compared to the NYSDEC Unrestricted Use soil cleanup objectives (SCOs) for volatile and semivolatile organic compounds, to approved soil cleanup objective levels for lead and chromium, and to approved residual metal concentrations found at the site for other metals. The ROD (Parsons, 2008b) also documented that other site conditions previously identified as a concern (i.e., prior presence of contaminated debris in Buildings 2073, 2076, 2078, 2084, and 2085 and the demolition and removal of Building 2079) had been removed and had achieved desired goals specified in the ROD.

The ROD further noted that several VOCs and metals had been identified at concentrations exceeding EPA or/and NYSDEC standards in the groundwater at SEAD-4/38; however, the noted elevated concentrations were observed only in a single round of sampling (i.e., not confirmed by during follow-up sampling rounds at the same location). The ROD concluded that the referenced VOCs and metals did not pose significant risks to potential receptors at SEAD-4/38 based on the baseline risk assessment and therefore, the approved remedy for the site did not require groundwater treatment or monitoring.

Section 3.1.9 of the *Final Remedial Design Work Plan and Design Report for SEAD-4* (Parsons, 2008c) indicated that long-term monitoring of the groundwater was not an element of the proposed remedial action at the site, and as such, the 13 groundwater monitoring wells located at site were designated for decommissioning in accordance with NYSDEC's guidance.

The locations of monitoring wells that were decommissioned at SEAD-4/38 are shown on Figure 3.

#### SEAD-5: Former Sewage Sludge Waste Piles

SEAD-5 is a rectangular parcel of land encompassing approximately 3.1 acres in the east-central portion of the Depot. SEAD-5 is located approximately 600 feet west of Building 135 and approximately 3,000 feet west-southwest of the Depot's main entrance on State Route 96. During the 1980s, sewage sludge from the Depot wastewater treatment plants (WWTPs) located in Buildings 4 and 715 was stockpiled at SEAD-5; sludge generated from the WWTPs was removed from drying beds near the buildings and transported to SEAD-5 bi-monthly where it was staged until its disposal. Portions of SEAD-5 were also used as part of the Depot's former Public Works storage and staging area for heavy equipment, materials, and supplies. At present some of the land within and surrounding SEAD-5 continues to be used by the Seneca County Highway Department as a staging and storage area for its equipment and supplies.

During 2009, a soil cover, required per terms of an approved ROD (Parsons, 2009b) for the site, was constructed over a portion of SEAD-5 where soils were determined to contain levels of carcinogenic polyaromatic hydrocarbons (cPAHs) at levels that posed potential risk or health hazards to future commercial and industrial users of the property. The soil cover was constructed of reclaimed soil originating from non-time critical removal actions conducted at other sites within the Depot, a demarcation barrier (i.e., colored "snow fence"), and 1-foot of borrow material (i.e., bank run sand, gravel, and crushed concrete) derived from on- and off-site sources. All soil and borrow material was

tested and compared to NYSDEC Restricted Commercial Use SCOs prior to its use. The soil cover overlies an area encompassing approximately 1.6 acres of land within SEAD-5 that is located adjacent to, and extends south of, the unnamed dirt road that runs along SEAD-5's northern bound. This unnamed road originates at the intersection of Administration Avenue, 4<sup>th</sup> Avenue, and South Street in the former Administration Area of the Depot, which is northeast of SEAD-5, and travels westward toward what previously was the location of the abandoned munitions deactivation furnace (SEAD-16) to the west. Provisions of the SEAD-5 ROD (Parsons, 2009b) prohibit unauthorized excavations or other activities that might compromise the integrity of the soil cover, prohibits use of the land for residential purposes, and prohibits access to and use of groundwater at the site. Long-term monitoring of the groundwater at SEAD-5 was not required as data provided indicated that the groundwater quality at the site was consistent with the regional groundwater quality. On this basis, all of the wells located at SEAD-5 were designated for decommissioning.

The locations of monitoring wells decommissioned at SEAD-5 are shown on **Figure 4**.

#### SEAD-11: Old Construction Debris Landfill

The former Old Construction Debris Landfill (SEAD-11) was located in the southwestern portion of the Seneca Army Depot Activity. During its existence, SEAD-11 measured approximately 4 acres in size. Prior to the interim removal action (IRA), which was conducted between October 2006 and January 2007 and during which all buried debris and fill was excavated and transported off-site for disposal at a licensed landfill, SEAD-11 was characterized as a terraced area of elevated topography that was set on the western face of downwardly sloping terrain that ends near the Depot's outer security fence line, in the vicinity of the former airfield's northwestern end. The current SEAD-11 site is vacant, and generally follows the pre-disposal activity sloping terrain that existed in this portion of the Depot prior to the Army's occupation.

After completion of the IRA at SEAD-11, the Army and the EPA selected and documented a remedial decision of No Further Action for SEAD-11 in the ROD (Parsons, 2009d) for the site, with release of the property for unrestricted use and unlimited exposures. On this basis, groundwater monitoring is no longer required at this site and the seven groundwater monitoring wells located at the site were selected for decommissioning.

The locations of monitoring wells decommissioned at SEAD-11 are shown on **Figure 5**.

#### SEAD-12: Radioactive Waste Burial Sites

The former Radiological Waste Burial Sites (SEAD-12) are located in the north-central portion of SEDA in the former secured Weapons Storage Area (WSA). Investigation of SEAD-12 originally began as the investigation of two separate areas, formerly designated as SEAD-12A (Radioactive Waste Burial Site – northeast corner of the Q) and SEAD-12B (Radioactive Waste Burial Site – northeast of Buildings 803, 804, and 805). SEAD-12A encompassed an area measuring approximately 1,500 feet long by 900 feet wide that was suspected to have included up to five separate, small burial pits. SEAD-12B encompassed an area measuring 300 feet long by 300 feet wide, and was suspected to have included a 5,000 gallon storage tank and a small dry waste pit.

After the completion of preliminary site investigations at SEAD-12A and SEAD-12B in 1995, the bounds of SEAD-12 were expanded based on the similarity of the chemicals found at the two historic SEADs and the general history of the overall WSA, which suggested that similar constituents were likely to exist throughout the larger area. The re-defined SEAD-12 encompassed 360 acres including all property north of Service Road No. 4 except that which was designated as SEAD-63, the Miscellaneous Components Burial Site, located partway along the western edge of the WSA. Land located north of Service Road Number 2 was used for disposal of laboratory and maintenance wastes and military components. This portion of SEAD-12 also includes Buildings 802 through 807, 810, 812 and 825, which were part of the WSA facility at SEDA. The eastern, western, and southern portions of SEAD-12 are primarily open fields and include Buildings 813 through 817, 819, and 823.

The results of the remedial investigation generally indicated that groundwater contamination, exclusive of the presence of trichloroethylene and dichloroethylene in one well (MW12-37), was not a significant concern within SEAD-12. The groundwater contamination identified at MW12-37 was addressed during an interim removal action in the area surrounding this well, and during this action, the affected well was removed (Parsons, 2006c). Based on this action, the Army does not foresee a future need to monitor groundwater at this site, and on this basis all wells were scheduled for decommissioning.

The locations of monitoring wells decommissioned at SEAD-12 are shown on Figures 6a and 6b.

# **SEAD-13 IRFNA Disposal Site**

The former Inhibited Red Fuming Nitric Acid (IRFNA) Disposal site (SEAD-13) encompasses approximately 3 acres and included two separate disposal areas, (SEAD-13 East and SEAD-13 West) located on the eastern and western sides of the southern end of the Depot's Duck Pond, respectively, near the entrance of its source tributary. The ground surface in both areas is less than 2 feet above the water level of the Duck Pond. SEAD-13 East is bound by mostly deciduous trees and the East-West Baseline Road to the north, by deciduous trees and grassland to the east and south, and by the Duck Pond to the west. SEAD-13 West is bound by grassland and low brush to the north, west and south, and by the Duck Pond to the east.

Historically, SEAD-13 was used during the early 1960s to dispose of unserviceable IRFNA, an oxidizer used in missile liquid propellant systems. Each barrel of unserviceable IRFNA was emptied through a water pressure-powered, stainless steel ejector that was fitted onto one barrel at a time while water was flowing through the ejector. The mixture of IRFNA and water was discharged to the disposal pit through a long polyethylene hose that discharged beneath the surface of the pit being used. The discharged IRFNA/water solution mixed with the limestone in the pit to facilitate the neutralization of the acid.

The approved ROD for SEAD-13 (Parsons, 2007) specified that No Further Action in conjunction with the implementation and maintenance of a land use control that prohibited access to and use of the groundwater at the site. The groundwater access and use restriction for SEAD-13 was imposed as a result of the groundwater concentrations of nitrate, aluminum, and manganese that were detected at the

site; however, there was no data collected that indicated that the contaminated groundwater extended beyond the bounds of the AOC, or discharged into the Duck Pond. The groundwater use/access LUC will remain in effect until concentrations of identified hazardous substances beneath the AOC are reduced to levels that allowed for unrestricted use and unlimited exposures. The ROD for SEAD-13 did not require groundwater monitoring, and on this basis groundwater monitoring is no longer required at this site and the groundwater monitoring wells located at the site were designated for decommissioning.

The locations of monitoring wells decommissioned at SEAD-13 are shown on Figure 7.

#### SEAD-24: Abandoned Powder Burning Pit

The former SEAD-24 site is located in the west-central portion of SEDA. The burning pit previously located in this AOC encompassed an area measuring approximately 325 feet by 150 feet; and it was surrounded on the east, south, and west by a U-shaped, vegetated berm that was approximately 4 feet high. The historic burn pit and berm area was excavated and removed during a time-critical removal action (TCRA) that was conducted between 2003 and 2006.

The former SEAD-24 site is bounded by West Kendaia Road to the north and by areas of open grassland and low brush to the east, south, and west. SEDA railroad tracks are located approximately 400 feet east of the former U-shaped berm. The Abandoned Powder Burning Pit was active during the 1940s and 1950s. Although operating practices at this site are unknown, black powder, M10 and M16 solid propellants, and explosive trash were probably disposed at this location by burning. Petroleum hydrocarbon fuel may have been used to initiate burns.

The Army and the EPA selected and documented a final remedial decision of No Further Action with release of the land for unrestricted use and unlimited exposures in the ROD for SEAD-24 (Parsons 2009c), and this decision received concurrence from the NYSDEC in 2009. As NFA was required for groundwater, the three groundwater monitoring wells installed at this site were designated for decommissioning by the Army.

The locations of monitoring wells decommissioned at SEAD-24 are shown on **Figure 8**.

#### SEAD-25: The Fire Training and Demonstration Pad

The former Fire Training and Demonstration Pad (SEAD-25) is located in the east-central portion of SEDA. The site is bound to the east by Administration Avenue, to the south by Ordnance Drive, to the west by grassland, brush and conifers, and to the north by grassland and a baseball field. SEAD-25 was used from the late 1960s to the late 1980s for fire control training. During the 1980s, the pad was used twice for firefighting demonstrations. A remedial action focused on the excavation of volatile organic compound and semi-volatile organic compound contaminated soil from the area was conducted in 2005. In addition, the approved ROD for SEAD-25 (Parsons, 2004b) required that groundwater monitoring be conducted until groundwater concentrations of volatile organic compounds achieved groundwater quality standards to demonstrate that additional impacts to the groundwater at and downgradient of the site were controlled. As part of the groundwater monitoring program design for SEAD-25 (Parsons, 2005b), the Army designed nine of the original 19 site wells

installed at the SEAD-25 site as locations that would be monitored to assess groundwater quality conditions. The periodic monitoring of wells at SEAD-25 continues in the designated nine wells (i.e., MW25-2, MW25-3, MW25-8, MW25-9, MW25-10, MW25-13, MW25-15, MW25-17, and MW25-18), and the Army also continues to gauge groundwater elevations in three other site well (i.e., MW25-1, MW25-6, and MW25-19) to provide additional information about the local groundwater elevation and flow conditions. SEAD-25 wells decommissioned by the Army during this effort included MW25-\$4d, MW25-7D, MW25-12D, MW25-14D, and MW25-16D; MW25-5D was removed during the remedial action in 2005

The locations of monitoring wells decommissioned at SEAD-25 are shown on Figure 9.

### SEAD-26: The Fire Training Pit and Area

The former Fire Training Pit and Area (SEAD-26) is located in the southeastern portion of SEDA. The site is bounded to the east and west by SEDA railroad tracks; on the south by grassland and low brush; and on the north by 7<sup>th</sup> Street. SEAD-26 was in use from 1977 to 1994. The site was used one to four times a year for firefighting training. During training activates various flammable materials were floated on water, ignited, and extinguished. Investigations of SEAD-26 indicated that soil at the site was contaminated with polyaromatic hydrocarbons (PAHs) at concentrations in excess of state soil cleanup objective levels. In addition, there was an indication that groundwater at the site had been impacted by volatile organic compounds at varying concentrations.

Based on these findings, the Army conducted a remedial action that focused on the excavation and disposal of soils that were contaminated with PAHs. In addition, the ROD prepared and approved for the site (Parsons, 2004b) included a requirement to conduct groundwater monitoring at the site to further characterize the quality of the groundwater. Five of the 11 groundwater wells previously installed at the site were selected for monitoring in the Remedial Design Work Plan and Design Report (Parsons, 2005b). At the conclusion of the first year of post-remedial action groundwater monitoring, the Army recommended that groundwater monitoring was no longer required at SEAD-26 as concentrations of volatile organic compounds of concern were below cleanup goals. The agencies agreed with the Army's recommendation, and as a result of their approval, groundwater monitoring is no longer required at SEAD-26 and the groundwater monitoring wells at the site were selected for decommissioning.

The locations of monitoring wells decommissioned at SEAD-26 are shown on **Figure 10**.

#### SEAD-27: Steam Cleaning Waste Tank in Building 360

Located in the east-central portion of the Depot, Building 360 was the former location of equipment refurbishing and reconstruction operations. During operations, equipment such as lathes, presses, and metal-working machines were degreased with steam, high-pressure water, and detergents in the cleaning area. Once cleaned the equipment was moved to other portions of Building 360 for rehabilitation. The Steam Cleaning Waste Tank (SEAD-27) was located in Building 360. It is a below ground, concrete tank above which track-mounted cars loaded with equipment requiring cleaning were positioned and steam cleaned. The floor surrounding and overlying the waste tank

slopes towards the tank to channel all condensate and over spray back towards the tracks and collection grates. The maximum capacity of the Steam Cleaning Waste Tank is approximately 5,000 gallons when filled to near the top or 1,100 gallons to the 2-foot freeboard mark. Use of the Steam Cleaning Waste Tank began in 1976 and ceased in January 1990.

The Army and the EPA selected and documented the implementation and maintenance of institutional controls as the proposed remedy for all land within the greater Planned Industrial/Office Development and Warehousing (PID) Areas at the Depot in the ROD (Parsons, 2004c) approved for SEAD-27. The identified institutional controls included a prohibition against the use of the land for residential purposes, and a prohibition against access to, and use of the underlying groundwater in the PID Area, due to the known poor quality of the groundwater in this area. The final ROD (Parsons, 2004c) did not contain any provision that required groundwater monitoring within the PID Area. On this basis, groundwater monitoring is not required at this site and the groundwater monitoring wells located at the site were selected for decommissioning.

The locations of monitoring wells decommissioned at SEAD-27 are shown on **Figure 11**.

#### SEAD-48: Row E0800 Pitchblende Ore Storage Igloos

SEAD-48 is located in the southern part of the Depot along the southern side of Igloo Road No. 39, bounded to the east by Fayette Road and to the west by Seneca Road. SEAD-48 consists of 11 ammunition storage bunkers (i.e., igloos) identified as Igloos E0801 through E0811. Each igloo is constructed of reinforced concrete that is shaped like a half-cylinder and measure 26.8 feet wide by 81 feet long by 13 feet high at their highest point. During the 1940s, 1,823 barrels of pitchblende, a uranium containing ore, were stored in the igloos for approximately three months. Upon the removal of the pitchblende, the igloos became a storage site for non-radioactive munitions through the late 1970s. Licensed radioactive commodities were stored in Igloos E0801 and E0802 until the late 1970s.

The Army and the EPA selected No Further Action as the final remedy for SEAD-48, and this decision was documented in the ROD (Parsons, 2009c) approved by both parties with concurrence obtained from the NYSDEC in 2009. As no further action was required for groundwater, the historic monitoring wells at this location were designated for decommissioning under this project.

The locations of monitoring wells decommissioned at SEAD-48 are shown on **Figure 12**.

# SEAD-59: Fill Area West of Building 135

The Fill Area West of Building 135 (SEAD-59) is located in the east-central portion of SEDA. SEAD-59 is approximately 4 acres in size and encompasses an area along both sides of an unnamed dirt road that runs from the intersection of South Street, 4<sup>th</sup> Avenue, and Administration Avenue westerly through the former Depot's and current Seneca County Highway Department's maintenance yard and into the area previously occupied by the Army's historic Deactivation Furnaces (SEAD-16 and SEAD-17). Historically, SEAD-59 was used for the disposal of construction debris and oily sludge, and as the Army's version of a local Department of Public Works yard where vehicles and materials were staged.

Based on the results of site investigations performed at SEAD-59, the Army and the EPA selected to impose land use restrictions that prohibited use of the property for residential purposes and prohibited access to, and use of, groundwater, at the site. NYSDEC concurred with the remedy selected for this site. The ROD (Parsons, 2009a) did not require that groundwater monitoring be conducted at this site Based on the approval of the ROD, groundwater monitoring is not required at this site and the groundwater monitoring wells located at the site were selected for decommissioning.

The locations of monitoring wells decommissioned at SEAD-59 are shown on **Figure 13**.

#### SEAD-63: Miscellaneous Components Burial Site

Located inside the former secured WSA adjacent to SEAD-12 in the northern area of the former Depot, SEAD-63 is bounded by paved roads on the north, south, and west and by open grassland to the east. SEAD-63 was previously an undeveloped burial site located in an area that measured approximately 480 ft. by 300 ft., much of which was covered with vegetation. SEAD-63 was used from the 1950s to 1980s as a disposal area for classified parts. During this period, multiple disposal pits were excavated along a north-south line measuring approximately 200 ft. in length. SEDA personnel associated with SEAD-63 identified the types of materials disposed at this site as metal parts and "inert materials."

The Army conducted a non-time critical removal action (NTCRA) at SEAD-63 in 2004, and during the NTCRA approximately 5,100 tons of solid waste was excavated from the former burial pit locations and transported off-site to a licensed landfill where it was disposed. Subsequent to the completion of the NTCRA, samples were collected from the monitoring wells surrounding the former burial pits and the results of these samples indicated that the local groundwater quality was within regulatory limits.

The Army and the EPA selected No Further Action as the final remedy for SEAD-63, and this decision was documented in the ROD (Parsons, 2006b) approved by both parties with concurrence obtained from the NYSDEC in 2006. As no further action was required for groundwater, the historic monitoring wells at this location were designated for decommissioning under this project.

The locations of monitoring wells decommissioned at SEAD-63 are shown on **Figure 14**.

#### SEAD-67: Dump Site east of Sewage Treatment Plant No. 4

The Dump Site east of Sewage Treatment Plant No. 4 (SEAD-67) is located in the east central portion of the Depot off of West Romulus Road. SEAD-67 was previously comprised of five waste piles and two berm structures that were located south of West Romulus Road in otherwise unoccupied land. Little is known about the history of SEAD-67 or the origin of the soil piles or bermed structures. An Expanded Site Inspection performed at SEAD-67 indicated that that soil at SEAD-67 had been impacted by SVOCs, polyaromatic hydrocarbons (PAHs), and mercury. Groundwater samples collected from SEAD-67 during the ESI indicated that elevated levels of iron, manganese, and aluminum were found in the groundwater at the site, but the groundwater samples characterized all contained elevated levels of turbidity.

The contents of the piles and the berm structures were removed during a TCRA conducted between 2002 and 2004 when all of the stockpiled soil and other surface soils were excavated and disposed off-site at a licensed landfill.

The Army and the EPA selected an action requiring land use controls as the final remedy for SEAD-67, and this decision was documented in the ROD (Parsons, 2007) approved by both parties with concurrence obtained from the NYSDEC in 2007. The selected land use controls included those imposed on the greater PID Area within the Depot prohibiting residential activities and access to and use of groundwater. No groundwater monitoring requirement was identified in the ROD (Parsons, 2007). On this basis, groundwater monitoring is not required at this site and the groundwater monitoring wells located at the site were selected for decommissioning.

The locations of monitoring wells decommissioned at SEAD-67 are shown on Figure 15.

#### SEAD-70: Fill Area Adjacent to former Building T-2110

The fill area that comprises SEAD-70 is located on the southern side of East-West Baseline Road approximately 750 feet west of its intersection with North-South Base Line Road. The AOC is a mounded landfill once used for construction debris. It is located on the southeastern side of the former Building T-2110, a collapsed wooden barn, which was demolished and removed in 2006.

Site investigations identified soil that was contaminated with select metals at levels that posed potential human health risks to future owners or users of the property. In response to this finding, the Army conducted a focused removal action of contaminated soil and then revised the risk assessment to reflect the new concentrations identified at the site. The results of this risk assessment are still pending regulatory review and approval. However, results for groundwater at this site did not identify undo risks to future owners or users of the site, and on this basis groundwater monitoring is not required at this site and the groundwater monitoring wells located at the site were selected for decommissioning.

The locations of monitoring wells decommissioned at SEAD-70 are shown on **Figure 16**.

#### SEAD-71: the Alleged Paint Disposal Area

The Alleged Paint Disposal Area (SEAD-71) is located in the east-central portion of SEDA. SEAD-71 is wedge shaped and is located west of 4<sup>th</sup> Avenue near Buildings 114 and 127. The AOC is approximately 2.4 acres in size and bounded on the north and south by railroad tracks serving Buildings 114 and 127. The topography is relatively flat with a gentle slope to the southwest.

Prior to the remedial investigation (RI), rumors suggested that paints and/or solvents were disposed at SEAD-71 in burial pits. The results of the RI test pitting operations failed to confirm the paint and oil disposal rumors, but did indicate that the area had been used for the disposal of construction debris, including sheet metal, asphalt, chain link fencing, sand and stone, piping, railroad ties, wood and cinders.

Based on the results of site investigations performed at SEAD-71, the Army and the EPA selected to impose land use restrictions that prohibited use of the property for residential purposes and prohibited

access to, and use of groundwater, at the site. NYSDEC concurred with the remedy selected for this site. Despite the groundwater access and use limitation, the ROD (Parsons, 2009a) did not require that groundwater monitoring be conducted at this site, as this restriction had previously been imposed throughout the greater PID Area. Based on the approval of the ROD, groundwater monitoring is not required at this site and the groundwater monitoring wells located at the site were selected for decommissioning.

The locations of monitoring wells decommissioned at SEAD-71 are shown on **Figure 13**.

#### SEAD-119B: Former Small Arms Range at the Lake Housing Area

The former Small Arms Range at the Lake Housing Area is located within approximately 5,000 feet west of the secured and fenced area of SEDA in the vicinity of an area where military personnel were previously billeted. This area is outside of the current SEDA boundaries, and within Sampson State Park. The site is bounded on the north by the gorge of the Kendaia Creek and by Scorpion Road on the south. The most recent photographs of SEAD-119B indicate that the site is overgrown with thick brush and small trees.

According to the ordnance and explosives (OE) Archive Search Report (ASR) (USACE, 1998), the Former Small Arms Range at the Lake Housing Area first appeared on Depot site plans in 27 February 1955 as part of the Sampson Air Force Base. Not much is known about the operation of SEAD-119B, but during operations it is likely that an earthen berm located at the range served as a backstop for small arms bullets.

The Army conducted an investigation of SEAD-119B in 2002 which included geophysical investigations, test pitting, soil sampling and analysis, and the installation and development of groundwater monitoring wells. However, based on the results of the geophysical survey, test pits, and soil sampling and analysis, the Army concluded that the area was not likely to have been used extensively, if at all, as a firing range. On this basis the Army concluded in the Final Findings Report for this site (Parsons, 2004a) that this presumed site should be removed from the list of potential SWMUs, and after review and consideration the EPA approved this recommendation. On this basis, the three wells previously installed at this location were selected for decommissioning as part of this effort.

The locations of monitoring wells decommissioned at SEAD-119B are shown on **Figure 17**.

#### SEAD-121C: Defense Reutilization and Marketing Office (DRMO) Yard

Located roughly 4,000 ft. southwest of the former Depot's main entrance off State Route 96, the DRMO Yard (SEAD-121C) is a triangular gravel lot encompassing approximately 8.75 acres. Several man-made features are prominent within the DRMO Yard including one storage building; an earthen-bottom, open storage cell; an elongated, segmented, rectangular-shaped, open concrete storage structure; and a multi-chambered, open storage cell. The DRMO Yard was used by the Army to store scrap metal, vehicles, and other items that were no longer needed for national defense, or that did not comply with legislative and regulatory requirements.

Based on the results of site investigations performed at SEAD-121C, the Army and the EPA selected to impose land use restrictions that prohibited use of the property for residential purposes and prohibited access to, and use of groundwater, at the site. NYSDEC concurred with the remedy selected for this site. Despite the groundwater access and use limitation, the ROD (Parsons, 2008a) did not require that groundwater monitoring be conducted at this site, as this restriction had previously been imposed throughout the greater PID Area. Based on the approval of the ROD, groundwater monitoring is not required at this site and the groundwater monitoring wells located at the site were selected for decommissioning.

The locations of monitoring wells decommissioned at SEAD-121C are shown on **Figure 18**.

### SEAD-122B: Small Arms Range at the Airfield Parcel

The Small Arms Range (SAR) (SEAD-122B) located within the Airfield Parcel of the Depot along Route 96A was previously used by the Air Force, Navy, and Army as a small arms qualification ground. The Airfield SAR is located in the southwest corner of SEDA adjacent to the SEDA Airfield. The SAR consists of two contiguous bermed small arms ranges: one previously used for small arms training, and the second previously used for machine gun targeting.

As part of a treatability study conducted in 2004, approximately 500 cy of soil were excavated from SEAD-122B. The excavations included removing of soil: from the floor of the range; from the western face of the backstop berm; and from a drainage swale.

Since construction by the Air Force in the early 1950s, the size and shape of the firing lanes and berms have been modified. The configuration of the firing lanes and berms observed during the investigations consisted of a 20-lane SAR with protective wooden baffles and a two-lane machine gun range. Each of the firing line areas were surrounded on three sides (north, east, and south) by earthen berms that measure up to 28 ft. in height. The firing line areas were suspected to contain UXO, high lead concentrations, and possibly other high metal concentrations. Underlying the firing lines within each range area was a network of footer drains that captured surface water runoff from within the firing lines and conveyed it to the open area located west of the SAR where it was discharged. The surface water and groundwater flow is anticipated to follow the general trend of the land and flow towards the west and Seneca Lake.

Results of site investigations, which included evaluations of soil, surface water, and groundwater, indicated that metals were present in soils at site at concentrations that exceeded soil cleanup objectives identified by the state. The Army subsequently commissioned at treatability study of site soils, and during the work conducted in 2004 removed, treated, and disposed of approximately 500 cubic yards from the former small arms range site. At the conclusion of this effort, the Army and EPA selected and documented in a ROD (Parsons, 2007) that no further action in concert with a land use control that prohibited use of the Airfield property to for residential purposes. This selected remedial action was approved by both parties, and concurrence was received from NYSDEC. Based on this decision, monitoring wells that were installed to facilitate groundwater sampling at this site are no longer

required, and they are included in the ones that have been designated for decommissioning under this project.

The locations of monitoring wells decommissioned at SEAD-122B are shown on Figure 19.

#### 3.0 WELL DECOMMISSIONING

#### 3.1 PRELIMINARY INSPECTION RESULTS

A preliminary site inspection of all wells selected for decommissioning was conducted between August 23 and August 27, 2010 to locate the wells and to evaluate if the wells were accessible by the equipment needed to complete the process. During these inspections, the general condition of the wells were also noted and recorded. During the site inspection, 31 wells of the selected wells could not be located in the field. Subsequent review of information recorded in prior site reports and documents, indicated that 26 of the missing wells were decommissioned during prior site actions; another four are suspected to have been proposed, but not installed as further review of available reports suggest that they were never sampled. The last well (MW70-2) is known to have been installed, as it was sampled during prior work commissioned by the Army, but no evidence of its prior existence was found at the site of installation. Further, five wells originally selected for decommissioning were retained due to their continued use for groundwater elevation gauging as part of the Ash landfill OU monitoring program, while two others were found to be in such poor condition they were added to those to be decommissioned.. The following information was collected during the preliminary site inspection:

- SEAD-13: Monitoring wells MW13-8, MW13-13, and MW13-14 were never installed based on a review of the associated documents. Brush or vegetation clearing was required to access 11 of the 12 locations prior to decommissioning.
- SEADs-5, 59, and 71: Monitoring wells MW5-1, MW5-3, MW59-3, MW59-5, and MW59-6, were decommissioned either during the SEAD-5 remedial action conducted in June 2009 or during the SEAD-59 and 71 Time Critical Removal Action conducted in 2002. Well 59-5 is suspected to never to have been installed as no record was ever found that it was sampled, and no coordinates were located for it in the Army's Seneca environmental database. Brush or vegetation clearing was required to access nine of the 10 locations prior to decommissioning.
- SEADs-12, 48, and 63: Monitoring wells MW12-07, MW12-08, MW12-10 through MW12-15, MW12-33, MW12-34, MW12-37 and MW12A-01, were decommissioned during either the SEAD-12 remedial action conducted in July 2009 or a previous program implemented at the Depot. Brush or vegetation clearing was required to access 28 of the 43 locations prior to decommissioning.
- SEADs-121C, 122B, and 70: Monitoring well MW70-2 was not found during the site work and was decommissioned during a previous program implemented at the Depot. A broken concrete collar was found at the location of MW70-3, but other components of the well (bollards and protective cap, well upriser and screen) were not found. Field personnel dug down to a depth of approximately five feet below grade but were unable to find any other portion of the well. The location was back filled with grout and covered with native soil.

Brush or vegetation clearing was required to access six of the 10 locations prior to be decommissioning.

- SEADs-25 and 26: Monitoring well MW25-11 was added to the list of wells to be decommissioned. Monitoring wells MW25-05D and MW26-09 were decommissioned during the remedial action conducted in November 2005. Brush or vegetation clearing was required to access 16 of the 22 locations prior to decommissioning.
- SEADs-24 and 67: Brush or vegetation clearing was required to access five of the six locations prior to decommissioning.
- Ash Landfill: Monitoring wells MW-45 and PT-11 were added to the list of wells to be decommissioned. Monitoring wells MW-48, MW-58D, MW-60, PT-16, and PT-20 were removed from the list since these wells are currently used for groundwater elevation gauging. Monitoring wells MW-05, MW-12A, MW21, and MW-35 were decommissioned during a previous program implemented at the Depot. Brush or vegetation clearing was required to access 22 of the 29 locations prior to decommissioning.
- SEADs 119B and 27: Brush or vegetation clearing was required to access three of the five locations prior to decommissioning
- SEAD-4: Monitoring wells MW4-4, MW4-6, MW4-8, and MW4-10 were decommissioned during the remedial action conducted in 2008. Brush or vegetation clearing was required to access seven of the nine locations prior to decommissioning.
- SEAD-11: Brush or vegetation clearing was required to access all seven locations prior to decommissioning.

The information generated during the preliminary site inspection is summarized on **Table 1-1**.

#### 3.2 WELL DECOMMISSIONING ACTIVITIES

The Army decommissioned 146 groundwater monitoring wells in accordance with specifications identified in its work plan "Well Decommissioning Work Plan" (Parsons, August 2010). The work plan originally designated 179 wells for decommissioning; however, during the preliminary inspection 31 wells could not be found at their identified locations; further review of available information indicated that 28 of these wells were previously decommissioned during prior investigation or removal actions conducted at the Depot or were not installed (i.e., MW59-5, MW13-13, and MW13-14). Three other wells previously not selected for decommissioning were found to be in poor condition and were included to those that were decommissioned; other decisions resulted in five wells originally scheduled for decommissioning to be retained. Northing and Easting coordinates of the decommissioned wells are provided in **Table 1-1**. The original construction details for all wells decommissioned (where available) are provided in **Appendix A**.

Two decommissioning events were conducted on or between the dates of September 13-24, 2010 and between the dates of January 25-27, 2011. The January 2011 mobilization event was required as site clearing and grubbing was not completed at some locations during September, access to the off-site

wells located in the farmer's field could not be gained until after the crop was harvested, and the selected driller had other work commitments during late September through early January 2011. A Notice of Intent (NOI) to proceed with the well decommissioning activities was submitted to the EPA and NYSDEC in August 2010. A copy of the NOI is provided in **Appendix B**.

The decommissioning of each well was addressed on an individual basis and the appropriate procedure was selected by the field geologist based upon the well's condition. The protective casing and its concrete pad, and if any bollards were present, were removed prior to well decommissioning. Personnel of Parsons and its subcontractor, GeoLogic NY decommissioned designated wells via one of two methods:

- Casing Pulling the well's bottom cap was punctured and then the well casing was pulled from the ground while the former well installation's void space was grouted by the tremmie pipe method with a Portland cement and Bentonite mixture as the casing was lifted. Once the well riser was removed, void space remaining at the ground surface was filled using either the remaining grout or the remaining grout covered with soil; or
- Grouting in Place the well's bottom cap was punctured and then the well casing was grouted from the bottom up by the tremmie pipe method with a Portland cement and Bentonite mixture. For wells grouted-in-place at SEAD-12 (MW12-35) and SEAD-25 (MW25-04D, MW25-07D, MW25-12D, MW25-14D, and MW25-16D), the concrete collar was removed, the protective casing and well upriser were cut off below grade at a level between 1 and 5 ft., and the level of grout in the upriser was topped off, and then the former well was covered with soil. MW71-1 and MW71-2 were initially constructed with roadway box completions and when the inner casing could not be pulled, the well riser and road box were filled with grout to grade surface.

Varying types of deep (i.e., bedrock) well installations were encountered in the Ash Landfill. In some cases (e.g., MW-35D, MW-38D, MW-41D, MW-42D, MW-49D, MW-51D, MW-54D, and MW-57D) and inner 2 inch PVC well screen and upriser was set in competent bedrock and was encased in an outer protective casing that extended from some depth below the competent/weathered shale interface to ground surface. In other cases (e.g., MW-50D, MW-52D, and MW-55D) and inner 2 inch PVC well screen and upriser was set in competent bedrock and was encased in an outer protective casing that extended from some depth below the competent/weathered shale interface to a level above ground surface. In either case, once the well screen was set in sand pack and the top seal was installed, the annulus between the inner and outer protective casing was then filled with a grout mixture. In the case of the former deep well installations, a cement/bentonite grout was used to fill the annular space, while in the latter installations (i.e., MW-50D, MW-52D, MW-55D), Volclay grout (bentonite only) was used to fill the annular space. Once the inner grout had been added, the wells were completed with protective collars, protective well uprisers, and locked covers.

The former wells (i.e., MW-35D, MW-38D, MW-41D, MW-42D, MW-49D, MW-51D, MW-54D, and MW-57D) were decommissioned by filling the inner well's screen and upriser

with a Portland cement and Bentonite mixture, removing the well's protective casing and concrete collar, topping off the grout level in the remaining well upriser and outer protective casing, and then filling the area around the decommissioned well with soil. For the other wells (i.e., MW-50D, MW-52D, MW-55D) the concrete collars were removed, the inner and other protective casing were cut off below grade level and removed, and then the location was covered with soil.

After the grout was brought to required level, the remaining space was backfilled with native material. A well decommission record was prepared for each well and is provided in **Appendix C**.

A general description of the well abandonment activities is provided in this section; details of specific well abandonment method used for each well is provided in **Table 1-2**. One hundred and twenty (120) of the 146 wells decommissioned were completed via casing pulling (grout, pull, grout – GPG), while seven had grout filled portions of the well left in place after they snapped during the casing pull (GPG/GIP).

- SEAD-13: 11 wells grouted, pulled casing, back grouted monitoring wells MW13-1 through MW13-7 and MW13-9 through MW13-12.
- SEADs-5, 59, and 71: seven wells grouted, pulled casing, back grouted monitoring wells MW5-2, MW59-1, MW59-2, MW59-4, MW59-7, MW59-8, MW71-3; pulling casing at one location resulted in part of the grout filled well screen/upriser to separate and be left in the back grouted hole monitoring well MW71-4.
- SEADs-12, 48, and 63: 38 wells grouted, pulled casing, back grouted monitoring wells MW12-01, MW12-02, MW12-04, MW12-06, MW12-09, MW12-16 through MW12-27, MW12-29 through MW12-32, MW12-38 through MW12-40, MW12A-02, MW12A-03, MW12B-01 through MWB-03, MW48-1 through MW48-6, MW48-8, and MW63-1 through MW63-3; pulling casing at three locations resulted in part of the grout filled well screen/upriser to separate and be left in the back grouted hole monitoring wells MW12-03, MW12-05, and MW48-7.
- SEADs-121C, 122B, and 70: eight wells grouted, pulled casing, back grouted –monitoring wells MW121C-3 through MW121C-6, MW-2 through MW-3, and MW70-1 and MW-70-4; pulling casing at one location resulted in part of the grout filled well screen/upriser to separate and be left in the back grouted hole monitoring wells MW-1 at SEAD-121B.
- SEADs-25 and 26: 11 wells grouted, pulled casing, back grouted monitoring wells Monitoring wells MW25-11, MW26-01 through MW26-08, MW26-10, and MW26-11.
- SEADs-24 and 67: six wells grouted, pulled casing, back grouted monitoring wells MW24-01 through MW24-03, and MW67-1through MW67-3.
- Ash Landfill: 16 wells grouted, pulled casing, back grouted monitoring wells MW-28, MW-30, MW-31, MW-33, MW-34, MW-36, MW-37, MW-43, MW-45, MW-47, MW-53, MW-59, MWT-11, PT-21A, PT-23, and PT-25; pulling casing at two locations resulted in part

of the grout filled well screen/upriser to separate and be left in the back grouted hole – monitoring wells PT-11 and PT-15.

- SEADs 119B and 27: five wells grouted, pulled casing, back grouted monitoring wells MW119B-1 through MW119B-3, MW-1 and MW-2.
- SEAD-4: nine wells grouted, pulled casing, back grouted monitoring wells MW4-1 through MW4-3, and MW4-5, MW4-7, MW4-9, MW4-11 through MW4-13.
- SEAD-11: seven wells grouted, pulled casing, back grouted monitoring wells MW11-1 through MW11-7.

The remaining wells were decommissioned by grouting in place. The list below summarizes the sites and wells that were decommissioned by grouting in place:

- SEADs-5, 59, and 71: Monitoring wells MW71-1 and MW71-2.
- SEADs-12, 48, and 63: Monitoring well MW12-35.
- SEADs-25 and 26: Monitoring wells MW25-04D, MW25-07D, MW25-12D, MW25-14D, and MW25-16D.
- Ash Landfill: Monitoring wells MW-35D, MW-38D, MW-41D, MW-42D, MW-49D, MW-50D, MW-51D, MW-52D, MW-54D, MW-55D, and MW-57D.

#### 3.3 WASTE GENERATION AND DISPOSAL

The solid waste generated during decommissioning activities included the protective steel casings, bollards, well pipe and screen, and concrete collars. The wastes were disposed as follows:

- No soil was recovered from any of the well installation locations. All soil disturbed around the decommissioned well sites was used as backfill at the location.
- All well installation debris, including protective steel casings, bollards, well pipe, and screen, and concrete collars (tare weight 16.38 tons) was disposed of as construction and demolition debris at a licensed landfill.

#### 4.0 SUMMARY

The "Well Decommissioning Work Plan" (Parsons August 2010) listed 182 groundwater monitoring wells for decommissioning, however, during the preliminary inspection 31 wells could not be found at their identified locations and are believed to have been decommissioned during other programs conducted at the Depot. One hundred forty-six (146 wells were decommissioned in accordance to the work plan (Parsons August 2010) and NYSDEC Groundwater Monitoring Well Decommissioning guidance document (January 2009).

Wells were abandoned via one of three methods:

- Casing Pulling the well's bottom cap was punctured, the well upriser was filled with grout and then the well casing was pulled from the ground while the former well installation's void space was grouted by the tremmie pipe method;
- Grouting in Place the well's bottom was punctured and the casing is grouted from the bottom up by the tremmie pipe method to approximately five feet bgs, the top five feet of casing and associated well materials is cut and removed from the ground; or
- Casing Pulling/Grout in Place Casing Pulling / Grout in Place Several of the wells that
  were selected for decommissioning by the grouting followed by casement pulling broke
  during the process. As a result, portions of the well casing and/or well screen were left in
  place, filled with grout and the remainder of the well annulus was overfilled with grout that
  was tremmied into place.

One hundred and twenty-seven (120 of the wells were decommissioned using the case pulling method, including seven in which a portion of the well screen/upriser broke off and was encased in the additional grout that was used to fill the vacant annular space of the vacated borehole. The remaining 19 wells were decommissioned by being grouted in place.

#### 5.0 REFERENCES

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Parsons, 2004c: Final Record of Decision for Sites Requiring Institutional Controls in the Planned Industrial/Office Development or Warehousing Areas, Seneca Army Depot Activity, Romulus, New York, September 2004.

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Parsons, 2007: Final Record of Decision for Seventeen No Action/No Further Action SWMUs Requiring Land Use Controls (SEADs 13, 39, 40, 41, 43/56/69, 44A, 44B, 52, 62, 64B, 64C, 64D, 67, 122B, and 122E), Seneca Army Depot Activity, Romulus, New York, March 2007.

Parsons, 2008a: Record of Decision for the Defense Reutilization and Marketing Office (DRMO) Yard (SEAD 121C) and the Rumored Cosmoline Oil Disposal Area (SEAD 121I), Seneca Army Depot Activity, Romulus, New York, June 2008.

Parsons, 2008b: Record of Decision for the Munitions Washout Facility (SEAD-4) and the Building 2079 Boiler Blowdown Pit (SEAD-38), Seneca Army Depot Activity, Romulus, New York, August 2008.

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Parsons 2009b: Record of Decision for Five Former Solid Waste Management Units (SWMUs), SEAD-1, Hazardous Waste Container Storage Facility; SEAD-2, PCB Transformer Storage Facility; SEAD-5, Sewage Sludge Waste Piles; SEAD-24, Abandoned Powder Burn Pit; and, SEAD-48, Row E0800 Pitchblende Storage Igloos, Seneca Army Depot Activity, Romulus, New York, April 2009.

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USAEHA, 1987: Interim Final Report, Groundwater Contamination Survey No. 38-26-0868-88, U.S. Army Environmental Hygiene Agency (USAEHA), July 1987.

# **TABLES**

Table 1-1 Groundwater Wells Decommissioned

Table 1-1
Groundwater Wells Decommissioned
Seneca Army Depot Activity

|                                              |                  |                          |                          |                                       |                                 |                      |                               |                  |                     |        |                       |                   |                  | Quantity       |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------|------------------|--------------------------|--------------------------|---------------------------------------|---------------------------------|----------------------|-------------------------------|------------------|---------------------|--------|-----------------------|-------------------|------------------|----------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                              |                  |                          |                          |                                       | Well Depth                      | 5.4                  | Selected                      |                  |                     |        | Top of                | Bottom of         | Ū                | of Grout       |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| AOC<br>Location                              | Well ID          | Northing                 | Easting                  | Monitoring<br>Well Type               | from Ground<br>Surface (ft bgs) | Date<br>Abandoned    | Decommissioning<br>Method (1) | Casing<br>Pulled | Bollards<br>Removed |        | Grout<br>(ft bgs) (2) | Grout<br>(ft bgs) | of Grout<br>(ft) | Used (gallons) | Field<br>Geologis | t Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| SEAD-03 Ash Landfill                         | MW-28            | 995073.237               | 739765.473               | Overburden/Bedrock                    | 8.6                             | 09/21/10             | GPG                           | 10.5             | YES                 | 3      | 1                     | 8.3               | 7.3              | 8              | SD                | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| SEAD-03 Ash Landfill                         | MW-30            | 994586.276               | 739891.668               | Overburden/Bedrock                    | 7                               | 09/20/10             | GPG                           | 10.5             | YES                 | 3      | 1                     | 6.6               | 5.6              | 6              | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-31            | 994473.894               | 739869.345               | Overburden/Bedrock                    | 9.4                             | 09/20/10             | GPG                           | 10.4             | YES                 | 3      | 1                     | 10.4              | 9.4              | 10             | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-33            | 994429.11                | 739989.204               | Overburden/Bedrock                    | 8.5                             | 09/20/10             | GPG                           | 9.8              | YES                 | 3      | 1                     | 7.2               | 6.2              | 7              | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-34            | 993641.89                | 739975.8                 | Overburden/Bedrock                    | 16.2                            | 09/20/10             | GPG                           | 18.1             | YES                 | 3      | 1                     | 16.2              | 15.2             | 17             | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill<br>SEAD-03 Ash Landfill | MW-35D<br>MW-36  | 994450.265<br>994467.85  | 739581.475<br>739577.77  | Bedrock<br>Overburden/Bedrock         | 54<br>14.71                     | 01/26/11<br>01/26/11 | GIP<br>GPG                    | 16.6             | YES<br>YES          | 3      | 0                     | 56.3<br>15.8      | 56.3<br>15.8     | NA<br>NA       | SD<br>SD          | Stickup removed, 6 inch casing in left in place, grouted all of 2 inch casing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| SEAD-03 Ash Landfill                         | MW-37            | 996634.22                | 739365.591               | Overburden                            | 11.7                            | 09/21/10             | GPG                           | 13.75            | YES                 | 3      | 1                     | 13.75             | 12.75            | 13             | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-38D           | 995521.008               | 739695.393               | Bedrock                               | 29.7                            | 09/21/10             | GPG                           | 33.4             | YES                 | 3      | 0                     | 29.7              | 29.7             | 30             | BMc               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-41D           | 995948.132               | 741843.734               | Bedrock                               | 44.5                            | 09/17/10             | GIP                           | 4.6              | YES                 | 3      | 2                     | 44.7              | 42.7             | 20             | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-42D           | 994341.349               | 741606.6                 | Bedrock                               | 45                              | 09/16/10             | GIP                           | 4.2              | YES                 | 3      | 2                     | 45                | 43               | 20             | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-43            | 995184.817               | 740805.392               | Overburden/Bedrock                    | 5.5                             | 09/16/10             | GPG                           | 7.6              | YES                 | 3      | 1                     | 4.8               | 3.8              | 5              | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill SEAD-03 Ash Landfill    | MW-45            | 995429.677               | 740320.317               | Overburden                            | 9                               | 09/20/10             | GPG                           | 8.4              | VEC                 | 2      | 0                     | 5.4               | 5.4              | 3              | BMc               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-47<br>MW-49D  | 995088.598<br>995171.215 | 739188.829<br>740321.557 | Overburden/Bedrock<br>Bedrock         | 5.5<br>35.5                     | 01/26/11<br>09/20/10 | GPG<br>GIP                    | 8.5              | YES<br>YES          | 3<br>3 | 0                     | 35                | 35               | NA<br>8        | SD<br>BMc         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-50D           | 995165.986               | 740321.337               | Bedrock                               | 57.8                            | 09/20/10             | GIP                           |                  | YES                 | 3      | 0                     | 57.8              | 57.8             | 20             | BMc               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-51D           | 995083.605               | 739188.678               | Bedrock                               | 33.3                            | 01/25/11             | GIP                           | 2.5              | YES                 | 3      | 0                     | 35.5              | 35.5             | NA             | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-52D           | 995078.253               | 739189.03                | Bedrock                               | 56.7                            | 01/25/11             | GIP                           | 3                | YES                 | 3      | 0                     | 58.7              | 58.7             | NA             | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-53            | 994820.784               | 739844.61                | Overburden/Bedrock                    | 8                               | 09/20/10             | GPG                           | 10.4             | YES                 | 3      | 0                     | 8.4               | 8.4              | 6              | BMc               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-54D           | 994826.338               | 739840.663               | Bedrock                               | 32.6                            | 09/20/10             | GIP                           | 2.6              | YES                 | 3      | 0                     | 32.4              | 32.4             | 32             | BMc               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill<br>SEAD-03 Ash Landfill | MW-55D<br>MW-57D | 994820.83<br>994768.367  | 739837.662<br>739436.205 | Bedrock<br>Bedrock                    | 55.9<br>33                      | 09/20/10<br>01/26/11 | GIP<br>GIP                    | 1.9              | YES<br>YES          | 3      | 0                     | 55.8<br>33.2      | 55.8<br>33.2     | 50<br>NA       | BMc<br>SD         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MW-59            | 994259.667               | 740825.707               | Overburden/Bedrock                    | 8.5                             | 09/16/10             | GPG                           | 9.7              | YES                 | 3      | 1                     | 7.8               | 6.8              | 7              | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | MWT-11           | 994615.116               | 739791.2916              | O VOI DUI GOI II DOGI GOIX            | 15                              | 09/20/10             | GPG                           | 10               | YES                 | 3      | 0                     | 10.3              | 10.3             | 11             | SD                | Five feet of screen grouted in place and left in hole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| SEAD-03 Ash Landfill                         | PT-11            | 994399.871               | 740785.36                | Overburden                            |                                 | 09/20/10             | GPG/GIP                       | 10               |                     |        | 1                     | 15.4              | 14.4             | 15             | SD                | Five feet of screen grouted in place and left in hole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| SEAD-03 Ash Landfill                         | PT-15            | 994183.74                | 739974.54                | Overburden/Bedrock                    | 15.4                            | 09/20/10             | GPG/GIP                       | 14.6             |                     |        | 1                     | 16                | 15               | 16             | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill                         | PT-21A           | 994924.11                | 740214.13                | O a sub a sud a su (D a dos a da      | 15<br>0.7                       | 09/20/10             | GPG                           | 20.4             | YES                 | 3      | 0                     | 18.4              | 18.4             | 10             | BMc               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-03 Ash Landfill<br>SEAD-03 Ash Landfill | PT-23<br>PT-25   | 995250.93<br>994377.25   | 739850.04<br>739840.14   | Overburden/Bedrock Overburden/Bedrock | 9.7<br>9.5                      | 09/20/10<br>09/20/10 | GPG<br>GPG                    | 10.5<br>12.1     | YES                 | 3      | 1                     | 7.7<br>9.3        | 6.7<br>8.3       | /<br>Q         | SD<br>SD          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-4                                       | MW4-1            | 999187.45                | 733603.32                | Overburden                            | 10.5                            | 09/20/10             | GPG                           | 12.1             |                     |        | 1                     | 10.7              | 9.7              | 10             | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-4                                       | MW4-2            | 987818.31                | 744938.98                | Overburden                            | 4                               | 09/21/10             | GPG                           | 5                |                     |        | 0                     | 3                 | 3                | 10             | BMc               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-4                                       | MW4-3            | 987226.64                | 745020.76                | Overburden                            | 9                               | 09/21/10             | GPG                           | 11.4             |                     |        | 1                     | 9.2               | 8.2              | 9              | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-4                                       | MW4-4            | 987026.91                | 744172                   | Overburden                            | 10                              |                      |                               |                  |                     |        |                       |                   |                  |                |                   | Decomissioned during SEAD-4 Remedial Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| SEAD-4                                       | MW4-5            | 999012.97                | 733407.82                | Overburden                            | 6                               | 09/17/10             | GPG                           | 8.4              |                     |        | 1                     | 5.9               | 4.9              | 6              | SD                | B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| SEAD-4<br>SEAD-4                             | MW4-6<br>MW4-7   | 987261.57<br>987525.87   | 744333.8<br>744761.6     | Overburden<br>Overburden              | 9.9                             | 09/17/10             | GPG                           | 8.5              |                     |        | 1                     | 6.4               | E 1              | 6              | SD                | Decomissioned during SEAD-4 Remedial Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| SEAD-4                                       | MW4-8            | 986990.62                | 744761.6                 | Overburden                            | 6.4<br>10                       | 09/17/10             | GPG                           | 0.5              |                     |        | '                     | 0.4               | 5.4              | 0              | 30                | Decomissioned during SEAD-4 Remedial Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| SEAD-4                                       | MW4-9            | 986867.47                | 745166.94                | Overburden                            | 6.2                             | 09/21/10             | GPG                           | 6.2              |                     |        | 1                     | 6.2               | 5.2              | 6              | SD                | Decomissioned during GEAD 4 Nemedial Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| SEAD-4                                       | MW4-10           | 986620.39                | 745454.9                 | Overburden                            | 8.1                             |                      |                               |                  |                     |        |                       |                   |                  |                |                   | Decomissioned during SEAD-4 Remedial Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| SEAD-4                                       | MW4-11           | 986944.99                | 745680.33                | Overburden                            | 9                               | 09/21/10             | GPG                           | 11.5             |                     |        | 1                     | 8.5               | 7.5              | 8              | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-4                                       | MW4-12           | 987174.73                | 745493.52                | Overburden                            | 11                              | 09/17/10             | GPG                           | 13.6             |                     |        | 1                     | 11.2              | 10.2             | NA             | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-4                                       | MW4-13           | 988053.51                | 745097.44                | Overburden                            | 6.8                             | 09/23/10             | GPG                           | 9                | VEO                 |        | 1                     | 6.4               | 5.4              | 6              | SD                | December and during OFAD 5 Demodial Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| SEAD-5<br>SEAD-5                             | MW5-1<br>MW5-2   | 998728.88<br>998755.38   | 750506.5<br>750226.06    | Overburden<br>Overburden              | 11.9<br>10                      | 09/24/10             | GPG                           | 12               | YES<br>YES          | ა<br>ვ | 1                     | 9.4               | 8.4              | g              | SD                | Decomissioned during SEAD-5 Remedial Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| SEAD-5                                       | MW5-3            | 998755.36                | 750225.06                | Overburden                            | 8.5                             | 03/24/10             | GFG                           | 14               | YES                 | 3      | ı                     | IJ. <del>+</del>  | 0.4              | ð              | SD                | Removed during SEAD-59 Time-Critical Removal Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| SEAD-11                                      | MW11-1           | 987710.92                | 744223.74                | Overburden                            | 14.2                            | 01/25/11             | GPG                           | 16.6             |                     |        | 0                     | 13.8              | 13.8             | NA             | SD                | The state of the s |
| SEAD-11                                      | MW11-2           | 987947.64                | 743550.97                | Overburden                            | 8.5                             | 09/21/10             | GPG                           | 12.3             | YES                 | 3      | 0                     | 8.5               | 8.5              | NA             | BMc               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-11                                      | MW11-3           | 987404.04                | 743517.47                | Overburden                            | 9                               | 09/21/10             | GPG                           | 7.4              |                     |        | 1                     | 7.4               | 6.4              | 7              | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-11                                      | MW11-4           | 987664.42                | 743443.95                | Overburden                            | 10.5                            | 09/21/10             | GPG                           | 13               | \                   | _      | 0                     | 10                | 10               | NA             | BMc               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-11                                      | MW11-5           | 987780.7                 | 743542.5                 | Overburden                            | 11                              | 09/21/10             | GPG                           | 11               | YES                 | 3      | 0                     | 10.5              | 10.5             | 10             | BMc               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-11<br>SEAD-11                           | MW11-6<br>MW11-7 | 987550.5<br>987462.8     | 743444.4<br>743485.7     | Overburden<br>Overburden              | 8.5<br>6                        | 09/21/10<br>09/21/10 | GPG<br>GPG                    | 10.35<br>7.6     |                     |        | 1<br>1                | 8<br>5.4          | 7<br>4.4         | /<br>5         | SD<br>SD          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-11                                      | MW12-01          | 1015591.7                | 745456.8                 | Overburden                            | 9                               | 09/21/10             | GPG                           | 11.4             | YES                 | 3      | 1                     | 9                 | A.4              | 9              | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-12<br>SEAD-12                           | MW12-01          | 1013710.3                | 745536.3                 | Overburden                            | 6                               | 09/15/10             | GPG                           | 8.6              | YES                 | 3      | 1                     | 6                 | 5                | 8              | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-12                                      | MW12-03          | 1015079.9                | 745477                   | Overburden                            | 18                              | 09/15/10             | GPG/GIP                       | 14.5             | YES                 | 3      | 1                     | 18                | 17               | 18             | SD                | Portion of screen left in place filled with grout.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| SEAD-12                                      | MW12-04          | 1016353.4                | 744983.6                 | Overburden                            | 12.2                            | 09/15/10             | GPG                           | 14.4             | YES                 | 3      | 1                     | 11.9              | 10.9             | 12             | SD                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SEAD-12                                      | MW12-05          | 1016284.4                | 743429                   |                                       | 18.4                            | 09/15/10             | GPG/GIP                       | 17.1             | YES                 | 3      | 1                     | 18.1              | 17.1             | 18             | SD                | Portion of screen left in place filled with grout.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| SEAD-12                                      | MW12-06          | 1016120.641              | 742086.6072              | O comb                                | 11.8                            | 01/25/11             | GPG                           | 11.6             | YES                 | 3      | 0                     | 11.6              | 11.6             | NA             | SD                | Democrad during CEAD 40 Democrat Astism of Destinated Biograph Biograph                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| SEAD-12                                      | MW12-07          | 1015394.579              | 744855.8807              | Overburden                            | 13.6<br>12                      |                      |                               |                  | YES<br>YES          | 3      |                       |                   |                  |                |                   | Removed during SEAD-12 Removal Action at Radiological Disposal Pits Removed during SEAD-12 Removal Action at Radiological Disposal Pits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| SEAD-12                                      | MW12-08          | 1015208.876              | 745182.9424              | Overburden                            | 12                              |                      |                               |                  | YES                 | 3      |                       |                   |                  |                |                   | Removed during SEAD-12 Removal Action at Radiological Disposal Pits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

Table 1-1
Groundwater Wells Decommissioned
Seneca Army Depot Activity

|                    |                      |                            |                            |                                       |                  |                      |                 |              |            |          |              |              |              | Quantity  |          |                                                                                                                                          |
|--------------------|----------------------|----------------------------|----------------------------|---------------------------------------|------------------|----------------------|-----------------|--------------|------------|----------|--------------|--------------|--------------|-----------|----------|------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                      |                            |                            |                                       | Well Depth       |                      | Selected        |              |            |          | Top of       | Bottom of    | Length       | •         |          |                                                                                                                                          |
| AOC                |                      |                            |                            | Monitoring                            | from Ground      | Date                 | Decommissioning | -            |            |          | Grout        | Grout        | of Grout     |           | Field    |                                                                                                                                          |
| Location           | Well ID              | Northing                   | Easting                    | Well Type                             | Surface (ft bgs) | Abandoned            | Method (1)      | Pulled       | Removed    | Bollards | (ft bgs) (2) | (ft bgs)     | (ft)         | (gallons) | Geologis | t Comments                                                                                                                               |
| SEAD-12            | MW12-09              | 1015955.513                | 744009.168                 | Overburden                            | 14.1             | 09/13/10             | GPG             | 16.6         | YES        | 3        | 1            | 13.8         | 12.8         | 13        | SD       | Described during OSAD 40 Described Addison of Dedictorical Discount Diffe                                                                |
| SEAD-12            | MW12-10              | 1015189.846                | 745007.4668                | Overburden/Bedrock                    | 17               |                      |                 |              | YES        | 3        |              |              |              |           |          | Removed during SEAD-12 Removal Action at Radiological Disposal Pits                                                                      |
| SEAD-12<br>SEAD-12 | MW12-11<br>MW12-12   | 1015123.089<br>1015162.954 | 744975.8444<br>744888.0145 | Overburden/Bedrock Overburden/Bedrock | 13.1<br>13       |                      |                 |              | YES<br>YES | 3        |              |              |              |           |          | Removed during SEAD-12 Removal Action at Radiological Disposal Pits Removed during SEAD-12 Removal Action at Radiological Disposal Pits  |
| SEAD-12<br>SEAD-12 | MW12-13              | 1015162.954                | 744875.6862                | Overburden/Bedrock                    | 13               |                      |                 |              | YES        | ა<br>ვ   |              |              |              |           |          | Removed during SEAD-12 Removal Action at Radiological Disposal Pits  Removed during SEAD-12 Removal Action at Radiological Disposal Pits |
| SEAD-12            | MW12-14              | 1015306.316                | 744664.5159                | Overburden/Bedrock                    | 14               |                      |                 |              | YES        | 3        |              |              |              |           |          | Removed during SEAD-12 Removal Action at Radiological Disposal Pits                                                                      |
| SEAD-12            | MW12-15              | 1015521.901                | 744743.1108                | Overburden/Bedrock                    | 13.1             |                      |                 |              | YES        | 3        |              |              |              |           |          | Removed during SEAD-12 Removal Action at Radiological Disposal Pits                                                                      |
| SEAD-12            | MW12-16              | 1015979.89                 | 743879.1864                | Overburden/Bedrock                    | 14.2             | 09/13/10             | GPG             | 16.6         | YES        | 3        | 1            | 14           | 13           | 14        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-17              | 1015807.672                | 743883.226                 | Overburden/Bedrock                    | 18.4             | 09/13/10             | GPG             | 21.2         | YES        | 3        | 1            | 18           | 17           | 18        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-18              | 1016052.372                | 743572.7763                | Overburden/Bedrock                    | 14.5             | 09/13/10             | GPG             | 17           | YES        | 3        | 1            | 17           | 16           | 17        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-19              | 1013585.11                 | 742593.6179                | Overburden/Bedrock                    | 11               | 09/14/10             | GPG             | 13.3         | YES        | 3        | 1            | 10.4         | 9.4          | 11        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-20              | 1013484.551                | 742579.8286                | Overburden/Bedrock                    | 14.4             | 09/14/10             | GPG             | 16.9         | YES        | 3        | 1            | 14.2         | 13.2         | 14        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-21              | 1013550.626                | 742955.5327                | Overburden/Bedrock                    | 11.2             | 09/14/10             | GPG             | 14           | YES        | 3        | 1            | 11.2         | 10.2         | 12        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-22              | 1013588.108                | 741426.1379                | Bedrock                               | 12.6             | 09/14/10             | GPG             | 15.8         | YES        | 3        | 1            | 31           | 12           | 13        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-23              | 1013490.534                | 741441.3235                | Bedrock                               | 13.3             | 09/14/10             | GPG             | 15.8         | YES        | 3        | 1            | 13.8         | 12.8         | 14        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-24              | 1012214.574                | 742040.503                 | Overburden/Bedrock                    | 10               | 09/15/10             | GPG<br>CPC      | 12.7         | YES        | 3        | 1            | 11.1         | 10.1         | 11<br>11  | SD       |                                                                                                                                          |
| SEAD-12<br>SEAD-12 | MW12-25<br>MW12-26   | 1012127.712<br>1012155.909 | 742084.164<br>742161.7122  | Overburden<br>Overburden              | 10.3<br>10.1     | 09/15/10<br>09/15/10 | GPG<br>GPG      | 13.7<br>13.5 | YES<br>YES | ა<br>ვ   | 1            | 10.8<br>11   | 9.8<br>10    | 11<br>11  | SD<br>SD |                                                                                                                                          |
| SEAD-12<br>SEAD-12 | MW12-27              | 1012826.292                | 742101.7122                | Overburden                            | 10.1             | 09/14/10             | GPG             | 12.8         | YES        | 3        | 1            | 9.7          | 8.7          | 10        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-29              | 1013765.552                | 744296.95                  | Bedrock                               | 14               | 09/14/10             | GPG             | 16.8         | YES        | 3        | 1            | 13.8         | 12.8         | 14        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-30              | 1013819.883                | 744281.4139                | Bedrock                               | 14.1             | 09/14/10             | GPG             | 16.8         | YES        | 3        | 1            | 14           | 13           | 14        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-31              | 1012105.078                | 744693.7058                | Bedrock                               | 10               | 09/14/10             | GPG             | 13           | YES        | 3        | 1            | 10           | 9            | 10        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-32              | 1012146.997                | 744711.3122                | Overburden                            | 10.5             | 09/14/10             | GPG             | 13.1         | YES        | 3        | 1            | 10.4         | 9.4          | 11        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-33              | 1015645.26                 | 744634.3651                |                                       | 15               |                      |                 |              | YES        | 3        |              |              |              |           |          | Removed during SEAD-12 Removal Action at Radiological Disposal Pits                                                                      |
| SEAD-12            | MW12-34              | 1015800.321                | 744650.6525                |                                       | 15               |                      |                 |              | YES        | 3        |              |              |              |           |          | Removed during SEAD-12 Removal Action at Radiological Disposal Pits                                                                      |
| SEAD-12            | MW12-35              | 1015919.123                | 743562.801                 | Bedrock                               | 38               | 09/13/10             | GIP             | 4.3          | YES        | 3        | 2            | 38           | 36           | NA        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-37              | 1014123.316                | 744790.3965                | Bedrock                               | 10.7             |                      |                 |              | YES        | 3        |              |              |              |           |          | Removed during SEAD-12 Supplemental Remedial Investigation                                                                               |
| SEAD-12            | MW12-38              | 1014091.533                | 744716.7817                | Overburden                            | 10.5             | 09/14/10             | GPG             | 10.5         | YES        | 3        | 0            | 10.5         | 10.5         | 10        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-39              | 1013934.991                | 744716.7185                | Overburden                            | 10.5             | 09/14/10             | GPG             | 10.2         | YES        | 3        | 0            | 10.2         | 10.2         | 10        | SD       |                                                                                                                                          |
| SEAD-12            | MW12-40              | 1014236.369                | 744470.3013                | Overburden                            | 10.9             | 09/14/10             | GPG             | 13.4         | YES<br>YES | 3        | 1            | 10.4<br>12   | 9.4          | 10<br>ΝΔ  | SD<br>SD |                                                                                                                                          |
| SEAD-12<br>SEAD-12 | MW12A-02<br>MW12A-03 | 1015117.1<br>1015521.4     | 744926.75<br>744532.25     | Overburden<br>Overburden              | 12<br>15.1       | 09/14/10<br>09/14/10 | GPG<br>GPG      | 13<br>16.4   | YES        | ა<br>ვ   | 1            | 14.9         | 13.9         | NA<br>NA  | SD       |                                                                                                                                          |
| SEAD-12<br>SEAD-12 | MW12B-01             | 1015934.4                  | 744332.23                  | Overburden                            | 17.8             | 09/13/10             | GPG             | 19.2         | YES        | 3        | 1            | 18           | 17           | 18        | SD       |                                                                                                                                          |
| SEAD-12<br>SEAD-12 | MW 12B-01            | 1015920.1                  | 743739.09                  | Overburden                            | 14               | 09/13/10             | GPG             | 16           | YES        | 3        | 1            | 14           | 13           | 13        | SD       |                                                                                                                                          |
| SEAD-12            | MW12B-03             | 1015995.9                  | 743517.06                  | Overburden                            | 14.6             | 09/13/10             | GPG             | 16           | YES        | 3        | 1            | 14           | 13           | 14        | SD       |                                                                                                                                          |
| SEAD-13            | MW13-1               | 998728.88                  | 750506.5                   | Overburden                            | 12.0             | 09/15/10             | GPG             | 14.9         |            | -        | 1            | 12.3         | 11.3         | 13        | SD       |                                                                                                                                          |
| SEAD-13            | MW13-2               | 998755.38                  | 750226.06                  | Overburden                            | 16.0             | 09/15/10             | GPG             | 18.4         |            |          | 1            | 16           | 15           | 16        | SD       |                                                                                                                                          |
| SEAD-13            | MW13-3               | 998884.31                  | 750255.94                  | Overburden                            | 24.0             | 09/15/10             | GPG             | 23.5         |            |          | 1            | 23.5         | 22.5         | 24        | SD       |                                                                                                                                          |
| SEAD-13            | MW13-4               | 998909.81                  | 749948.88                  | Overburden                            | 8.5              | 09/16/10             | GPG             | 12.5         |            |          | 1            | 9.9          | 8.9          | 9         | SD       |                                                                                                                                          |
| SEAD-13            | MW13-5               | 999035.94                  | 749874.13                  | Overburden                            | 16.0             | 09/16/10             | GPG             | 18.75        |            |          | 1            | 16.15        | 15.15        | 17        | SD       |                                                                                                                                          |
| SEAD-13            | MW13-6               | 999029.5                   | 750345.88                  | Overburden                            | 10.0             | 09/16/10             | GPG             | 11.3         |            |          | 1            | 9            | 8            | 9         | SD       |                                                                                                                                          |
| SEAD-13            | MW13-7               | 998815.27                  | 749980.43                  | Overburden                            | 8.0              | 09/15/10             | GPG             | 10.6         |            |          | 1            | 7.8          | 6.8          | 8         | SD       | Mall acide wat he found                                                                                                                  |
| SEAD-13            | MW13-8               | 000000 00                  | 750000 50                  |                                       |                  | 00/45/40             | ODO             | 46.0         |            |          | 4            | 440          | 40.0         | 45        | OD.      | Well could not be found                                                                                                                  |
| SEAD-13            | MW13-9               | 998663.96                  | 750366.52                  | Overhunden                            | 4E O             | 09/15/10             | GPG<br>GPG      | 16.2         |            |          | 1            | 14.8         | 13.8         | 15<br>14  | SD       |                                                                                                                                          |
| SEAD-13<br>SEAD-13 | MW13-10<br>MW13-11   | 998964.4333<br>998857.0719 | 750023.7785<br>750060.1322 | Overburden<br>Overburden              | 15.0<br>15.0     | 09/15/10<br>09/15/10 | GPG<br>GPG      | 16.2<br>16.6 |            |          | 1            | 14.2<br>14.8 | 13.2<br>13.8 | 14<br>15  | SD<br>SD |                                                                                                                                          |
| SEAD-13            | MW13-12              | 999298                     | 750894.75                  | Overburden                            | 11.3             | 09/16/10             | GPG             | 10.0         |            |          | 1            | 9.9          | 8.9          | 9         | SD       |                                                                                                                                          |
| SEAD-13            | MW13-13              | 999309.5                   | 750994.75                  | overburder                            | 15.0             | 55/10/10             | Oi O            | 10.0         |            |          | ı            | 0.0          | 0.0          | 9         | 30       | Well could not be found                                                                                                                  |
| SEAD-13            | MW13-14              | 999298                     | 999231.21                  | 705525.17                             | 15.0             |                      |                 |              |            |          |              |              |              |           |          | Well could not be found                                                                                                                  |
| SEAD-24            | MW24-01              | 998948.83                  | 740101.57                  | Overburden                            | 10               | 09/22/10             | GPG             | 12.1         |            |          | 1            | 9.6          | 8.6          | 9         | SD       |                                                                                                                                          |
| SEAD-24            | MW24-02              | 999255.17                  | 739843.61                  | Overburden                            | 16               | 09/22/10             | GPG             | 18.4         |            |          | 1            | 16.2         | 15.2         | 16        | SD       |                                                                                                                                          |
| SEAD-24            | MW24-03              | 998999.77                  | 739750.62                  | Overburden                            | 15               | 09/22/10             | GPG             | 17.3         |            |          | 1            | 14.9         | 13.9         | 15        | SD       |                                                                                                                                          |
| SEAD-25            | MW25-04D             | 998023.3883                | 750983.1189                | Bedrock                               | 23.8             | 09/22/10             | GIP             | 2.2          | YES        | 3        | 0            | 23.1         | 23.1         | 25        | BMc      |                                                                                                                                          |
| SEAD-25            | MW25-05D             | 998081.3786                | 750938.3683                | Bedrock                               | 21.7             |                      | GIP             | 2            | YES        | 3        |              |              |              |           |          | Decomissioned during SEAD-25 Remedial Action                                                                                             |
| SEAD-25            | MW25-07D             | 998279.0181                | 751016.2292                | Bedrock                               | 30.2             | 09/22/10             |                 |              | YES        | 3        | 0            | 28.2         | 28.2         | 30        | BMc      |                                                                                                                                          |
| SEAD-25            | MW25-11              | 997865.7588                | 750955.8786                | Overburden                            |                  | 09/22/10             | GPG             | 7.3          |            |          | 0            | 5.5          | 5.5          | 10        | BMc      |                                                                                                                                          |
| SEAD-25            | MW25-12D             | 997867.0397                | 750966.7103                | Bedrock                               | 24.2             | 09/22/10             | GIP             | 1.8          | YES        | 3        | 0            | 23.3         | 23.3         | 20        | BMc      |                                                                                                                                          |
| SEAD-25            | MW25-14D             | 997867.0994                | 750875.7165                | Bedrock                               | 23.2             | 09/22/10             | GIP             | 7            | YES        | 3        | 0            | 22.8         | 22.8         | 25        | BMc      |                                                                                                                                          |
| SEAD-25            | MW25-16D             | 997975.0098                | 750771.8704                | Bedrock                               | 25               | 09/22/10             | GIP             | 3            | YES        | 3        | U            | 25           | 25           | 25        | BMc      |                                                                                                                                          |

Table 1-1
Groundwater Wells Decommissioned
Seneca Army Depot Activity

|                        |                      |                            |                            |                                       |                                 |                      |                               |                  |                     |                       |                       |                   |                  | Quantity          |                    |                                                                               |
|------------------------|----------------------|----------------------------|----------------------------|---------------------------------------|---------------------------------|----------------------|-------------------------------|------------------|---------------------|-----------------------|-----------------------|-------------------|------------------|-------------------|--------------------|-------------------------------------------------------------------------------|
| 400                    |                      |                            |                            | Manitarina                            | Well Depth                      | Data                 | Selected                      | Casina           | Dellanda            | Niahan af             | Top of                | Bottom of         |                  | of Grout          | Field.             |                                                                               |
| AOC<br>Location        | Well ID              | Northing                   | Easting                    | Monitoring<br>Well Type               | from Ground<br>Surface (ft bgs) | Date<br>Abandoned    | Decommissioning<br>Method (1) | Casing<br>Pulled | Bollards<br>Removed | Number of<br>Bollards | Grout<br>(ft bgs) (2) | Grout<br>(ft bgs) | of Grout<br>(ft) | Used<br>(gallons) | Field<br>Geologist | Comments                                                                      |
| SEAD-26                | MW26-01              | 992228.7434                | 751589.2004                | Bedrock                               | 6                               | 09/23/10             | GPG                           | 8.5              | YES                 | 3                     | 1                     | 6.5               | 5.5              | 4                 | SD                 |                                                                               |
| SEAD-26                | MW26-02              | 992769.4315                | 751106.8867                | Overburden                            | 14                              | 09/23/10             | GPG                           | 16.5             | YES                 | 3                     | 1                     | 14.1              | 13.1             | 15                | SD                 |                                                                               |
| SEAD-26                | MW26-03              | 992215.6709                | 751115.0404                | Overburden/Bedrock                    | 14                              | 09/23/10             | GPG                           | 16.4             | YES                 | 3                     | 1                     | 14                | 13               | 14                | SD                 |                                                                               |
| SEAD-26                | MW26-04              | 991690.1854                | 751127.6237                | Overburden/Bedrock                    | 11.5                            | 09/23/10             | GPG                           | 13               | YES                 | 3                     | 1                     | 11                | 10               | 11                | SD                 |                                                                               |
| SEAD-26                | MW26-05              | 992272.1148                | 751168.1856                | Overburden/Bedrock                    | 15                              | 09/23/10             | GPG                           | 17.1             | YES                 | 3                     | 1                     | 15.4              | 14.4             | 16                | SD                 |                                                                               |
| SEAD-26                | MW26-06              | 992234.8911                | 751251.0741                | Overburden/Bedrock                    | 15                              | 09/23/10             | GPG                           | 17               | YES                 | 3                     | 1                     | 17                | 16               | 16                | SD                 |                                                                               |
| SEAD-26                | MW26-07              | 992178.7365                | 751195.6651                | Overburden/Bedrock                    | 18                              | 09/23/10             | GPG                           | 20               | YES                 | 3                     | 1                     | 18                | 17               | 17                | SD                 |                                                                               |
| SEAD-26                | MW26-08              | 991756.145                 | 751204.2657                | Overburden/Bedrock                    | 11.5                            | 09/23/10             | GPG                           | 13.5             | YES                 | 3                     | 1                     | 13.5              | 12.5             | 12                | SD                 | Decemination of during SEAD 26 Demodial Action                                |
| SEAD-26<br>SEAD-26     | MW26-09<br>MW26-10   | 991724.1357<br>991653.8949 | 751224.9496<br>751205.9184 | Overburden/Bedrock Overburden/Bedrock | 12.2<br>12                      | 09/23/10             | GPG                           | 13.5             | YES<br>YES          | 3                     | 1                     | 12                | 11               | 12                | SD                 | Decomissioned during SEAD-26 Remedial Action                                  |
| SEAD-26                | MW26-11              | 992691.2201                | 751205.9164                | Overburden/Bedrock                    | 15                              | 09/23/10             | GPG                           | 16.4             | YES                 | 3                     | 1                     | 15.1              | 14.1             | 15                | SD                 |                                                                               |
| SEAD-27                | MW-1                 | 997165.98                  | 749991.67                  | Overburden/Bedrock                    | 15                              | 09/24/10             | GPG                           | 17.2             | 120                 | <u> </u>              | 1                     | 14.9              | 13.9             | 18                | SD                 |                                                                               |
| SEAD-27                | MW-2                 | 997149.31                  | 749926.33                  |                                       | 15                              | 09/24/10             | GPG                           | 17.4             |                     |                       | 1                     | 14.8              | 13.8             | 18                | SD                 |                                                                               |
| SEAD-48                | MW48-1               | 988650 (approx)            | 745950 (approx)            | Overburden                            | 8                               | 09/21/10             | GPG                           | 9.9              |                     |                       | 1                     | 7.5               | 6.5              | 7                 | SD                 |                                                                               |
| SEAD-48                | MW48-2               | 988615 (approx)            |                            | Overburden                            | 7.6                             | 09/23/10             | GPG                           | 10               |                     |                       | 1                     | 8                 | 7                | 8                 | SD                 |                                                                               |
| SEAD-48                | MW48-3               | ` ,                        | 746770 (approx)            | Overburden                            | 8                               | 09/21/10             | GPG                           | 10               |                     |                       | 1                     | 7.3               | 6.3              | 7                 | SD                 |                                                                               |
| SEAD-48                | MW48-4               |                            | 747355 (approx)            | Overburden                            | 8                               | 09/21/10             | GPG                           | 11               | YES                 | 3                     | 0.2                   | 7.3               | 7.1              | NA                | BMc                |                                                                               |
| SEAD-48                | MW48-5               |                            | 748030 (approx)            | Overburden                            | 13                              | 09/21/10             | GPG                           | 15               | YES                 | 3                     | 0.5                   | 13                | 12.5             | NA                | BMc                |                                                                               |
| SEAD-48                | MW48-6               |                            | 748850 (approx)            | Overburden                            | 8                               | 09/21/10             | GPG                           | 11               | YES                 | 3                     | 0                     | 8                 | 7.8              | NA                | BMc                |                                                                               |
| SEAD-48                | MW48-7               | 989365 (approx)            |                            | Overburden                            | 9.5                             | 09/22/10             | GPG/GIP                       | 11.4             |                     |                       | 1                     | 9.3               | 8.3              | 9                 | SD                 | Screen filled with grout separated from riser when casing pulled.             |
| SEAD-48                | MW48-8               | ( 1 1 /                    | 747695 (approx)            | Overburden                            | 0.0                             | 09/22/10             | GPG                           | 8                | VEC                 | -                     | 1                     | 7.0               | 7.0              | 5                 | SD                 |                                                                               |
| SEAD-59<br>SEAD-59     | MW59-1<br>MW59-2     | 998909.81<br>999035.94     | 749948.88<br>749874.13     | Overburden<br>Overburden              | 9.2<br>11.4                     | 01/25/11<br>09/24/10 | GPG<br>GPG                    | 9.3<br>13.2      | YES<br>YES          | 3                     | 1                     | 7.3<br>13.2       | 7.3<br>12.2      | NA<br>12          | SD<br>SD           |                                                                               |
| SEAD-59<br>SEAD-59     | MW59-3               | 999035.94                  | 750345.88                  | Overburden                            | 8.8                             | 09/24/10             | GPG                           | 13.2             | YES                 | 3<br>3                | '                     | 13.2              | 12.2             | 12                | SD                 | Removed during SEAD-59 Time-Critical Removal Action                           |
| SEAD-59<br>SEAD-59     | MW59-4               | 998815.27                  | 749980.43                  | Overburden                            | 1.5                             | 09/23/10             | GPG                           | 8.6              | YES                 | 3                     | 1                     | 7.1               | 6.1              | 8                 | SD                 | Removed during SEAD-39 Time-Officer Removal Action                            |
| SEAD-59                | MW59-5               | 000010.27                  | , 10000110                 |                                       | 15                              | 00/20/10             | 0. 0                          | 0.0              | YES                 | 3                     | ·                     |                   | <b>.</b>         | · ·               | 0.5                | No Record could be found.                                                     |
| SEAD-59                | MW59-6               | 998663.96                  | 750366.52                  |                                       | 15                              |                      |                               |                  | YES                 | 3                     |                       |                   |                  |                   |                    | Decomissioned during SEAD-5 Remedial Action                                   |
| SEAD-59                | MW59-7               | 998964.4333                | 750023.7785                |                                       | 15                              | 09/24/10             | GPG                           | 14.7             | YES                 | 3                     | 1                     | 12                | 11               | 12                | SD                 | ·                                                                             |
| SEAD-59                | MW59-8               | 998857.0719                | 750060.1322                |                                       | 15                              | 09/24/10             | GPG                           | 13.4             | YES                 | 3                     | 1                     | 11.1              | 10.1             | 13                | SD                 |                                                                               |
| SEAD-63                | MW63-1               | 1013123.9                  | 741608.56                  | Overburden                            | 8.7                             | 09/14/10             | GPG                           | 10               | YES                 | 3                     | 1                     | 8.8               | 7.8              | 9                 | SD                 |                                                                               |
| SEAD-63                | MW63-2               | 1012980.3                  | 741136.13                  | Overburden                            | 8.1                             | 09/14/10             | GPG                           | 9.6              | YES                 | 3                     | 1                     | 7.5               | 6.5              | 8                 | SD                 |                                                                               |
| SEAD-63                | MW63-3               | 1013182.1                  | 741130.19                  | Overburden                            | 8.1                             | 09/14/10             | GPG                           | 9.5              | YES                 | 3                     | 1                     | 9.5               | 8.5              | 10                | SD                 |                                                                               |
| SEAD-67                | MW67-1               | 1002498.4                  | 748911.69                  | Overburden                            | 11.3                            | 09/16/10             | GPG                           | 13               | YES                 | 3                     | 1                     | 11.5              | 10.5             | 12                | SD                 |                                                                               |
| SEAD-67<br>SEAD-67     | MW67-2<br>MW67-3     | 1002256.7<br>1002492.1     | 748953.25<br>748794.94     | Overburden<br>Overburden              | 11.8<br>11.3                    | 09/16/10<br>09/16/10 | GPG<br>GPG                    | 12.9<br>13       | YES<br>YES          | 3                     | 1                     | 12<br>11.5        | 11<br>10.5       | 12<br>12          | SD<br>SD           |                                                                               |
| SEAD-70                | MW70-1               | 1002492.1                  | 740889.13                  | Overburden                            | 10.4                            | 09/16/10             | GPG                           | 11.8             | YES                 | 3                     | 1                     | 10.5              | 9.5              | 11                | SD                 |                                                                               |
| SEAD-70<br>SEAD-70     | MW70-2               | 1007329.9                  | 740555.63                  | Overburden                            | 11.6                            | 03/10/10             | GI G                          | 11.0             | YES                 | 3                     | '                     | 10.5              | 9.0              | 11                | 30                 | Well could not be located.                                                    |
| SEAD-70                | MW70-2               | 1007323.7                  | 740552.25                  | Overburden                            | 9.4                             | 09/16/10             |                               |                  | YES                 | 3                     | 0                     | 4                 | 4                |                   | SD                 | Broken pad found; dug down 4 feet no well encountered, Backgroted to surface. |
| SEAD-70                | MW70-4               | 1007055.1                  | 740563.5                   | Overburden                            | 10.1                            | 09/16/10             | GPG                           | 11.4             | YES                 | 3                     | 1                     | 10                | 9                | 10                | SD                 | . , , , , , , , , , , , , , , , , , , ,                                       |
| SEAD-71                | MW71-1               | 999298                     | 750894.75                  | Overburden                            | 9.4                             | 09/24/10             | GIP                           | 0                | YES                 | 3                     | 0                     | 9.3               | 9                | 6                 | SD                 |                                                                               |
| SEAD-71                | MW71-2               | 999309.5                   | 750986.44                  | Overburden                            | 6.6                             | 09/24/10             | GIP                           | 0                | YES                 | 3                     | 0                     | 6.6               | 6.6              | NA                | SD                 |                                                                               |
| SEAD-71                | MW71-3               | 999229.81                  | 750869                     | Overburden                            | 6.4                             | 01/25/11             | GPG                           | 7.6              | YES                 | 3                     | 0                     | 6.1               | 6.1              | NA                | SD                 |                                                                               |
| SEAD-71                | MW71-4               | 999231.2137                | 750525.1669                | Overburden                            | 18.7                            | 09/24/10             | GPG/GIP                       | 15.9             | YES                 | 3                     | 1                     | 18.7              | 17.7             | 15                | SD                 | When casing pulled, five feet of grout filled screen broke off.               |
| SEAD-119B              | MW119-1              | 999187.45                  | 733603.32                  | Overburden                            | 15                              | 01/27/11             | GPG                           | 21.5             |                     |                       | 0                     | 19                | 19               | NA                | SD                 |                                                                               |
| SEAD-119B              | MW119-2              | 999235.09                  | 733305.07                  | Overburden                            | 15<br>15                        | 01/27/11             | GPG                           | 21.25            |                     |                       | 0                     | 19                | 19               | NA                | SD                 |                                                                               |
| SEAD-119B              | MW119-3              | 999012.97                  | 733407.82                  | Overburden                            | 15                              | 01/27/11             | GPG                           | 16.1             |                     |                       | U                     | 14.1              | 14.1             | NA<br>0           | SD                 |                                                                               |
| SEAD-121C<br>SEAD-121C | MW121C-3<br>MW121C-4 |                            | 749999.17<br>749922.29     | Overburden                            | 15<br>15                        | 09/23/10<br>09/22/10 | GPG<br>GPG                    | 10.1<br>9.64     |                     |                       | 1                     | 9.1<br>8.2        | 8.1<br>7.2       | 9                 | SD<br>SD           |                                                                               |
| SEAD-121C<br>SEAD-121C | MW121C-4<br>MW121C-5 |                            | 749922.29<br>749448.53     | Overburden<br>Overburden              | 15                              | 09/22/10             | GPG                           | 9.64<br>10.2     |                     |                       | 1<br>1                | 8.2<br>8.7        | 7.2<br>7.7       | ο<br>0            | SD                 |                                                                               |
| SEAD-121C<br>SEAD-121C | MW121C-6             |                            | 749446.53<br>749613.64     | Overburden                            | 15                              | 09/22/10             | GPG                           | 9.8              |                     |                       | 1                     | 9.8               | 7.7<br>8.8       | 9                 | SD                 |                                                                               |
| SEAD-122B              | MW-1                 | 986840.19                  | 739802.9                   | Overburden                            | 16.5                            | 09/24/10             | GPG/GIP                       | 10               |                     |                       | <u>·</u><br>1         | 16.4              | 15.4             | 16                | SD                 | Eight feet of screen filled with grout broke off and was left in place.       |
| SEAD-122B              | MW-2                 | 986779.02                  | 739393.06                  | Overburden                            | 16                              | 09/24/10             | GPG                           | 17.9             |                     |                       | 1                     | 16                | 15               | 8                 | SD                 |                                                                               |
| SEAD-122B              | MW-3                 | 987014.26                  | 739409.59                  | Overburden                            | 14.5                            | 09/24/10             | GPG                           | 16.4             |                     |                       | 1                     | 14.4              | 13.4             | 8                 | SD                 |                                                                               |
|                        |                      |                            |                            |                                       |                                 |                      |                               |                  |                     |                       | 1<br>1                |                   |                  | 8<br>8            |                    |                                                                               |

## Notes

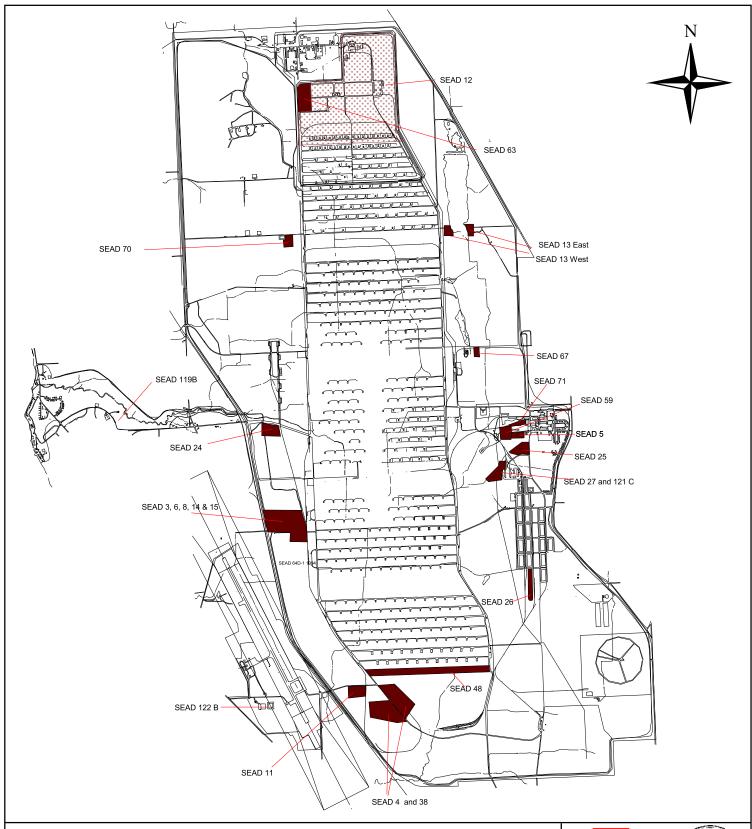
NA = Not avaiable.

<sup>1 -</sup> GIP = Grout in Plance. GPG = Grout, pull, grout. GPG/GIP = Grout, pull, a portion of well broke off during pull and was left in hole, grouted in place.

<sup>2 -</sup> ft

# **FIGURES**

| Figure 1  | Location of SWMUs where Monitoring Wells were Decommissioned             |
|-----------|--------------------------------------------------------------------------|
| Figure 2  | Wells Decommissioned, Ash Landfill Operable Unit, SEAD 3, 6, 8, 14, & 15 |
| Figure 3  | Wells Decommissioned, SEAD-4 and 38                                      |
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| Figure 5  | Wells Decommissioned, SEAD-11                                            |
| Figure 6a | Wells Decommissioned, SEAD-12                                            |
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| Figure 7  | Wells Decommissioned, SEAD-13                                            |
| Figure 8  | Wells Decommissioned, SEAD-24                                            |
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| Figure 15 | Wells Decommissioned, SEAD-67                                            |
| Figure 16 | Wells Decommissioned, SEAD-70                                            |
| Figure 17 | Wells Decommissioned, SEAD-119B                                          |
| Figure 18 | Wells Decommissioned, SEAD-121C                                          |
| Figure 19 | Wells Decommissioned, SEAD-122B                                          |







Location of SEAD-12 where wells were decommissioned.



Locations where monitoring wells were deconmissioned.

o:\seneca\well abandonment\well abandonment.apr





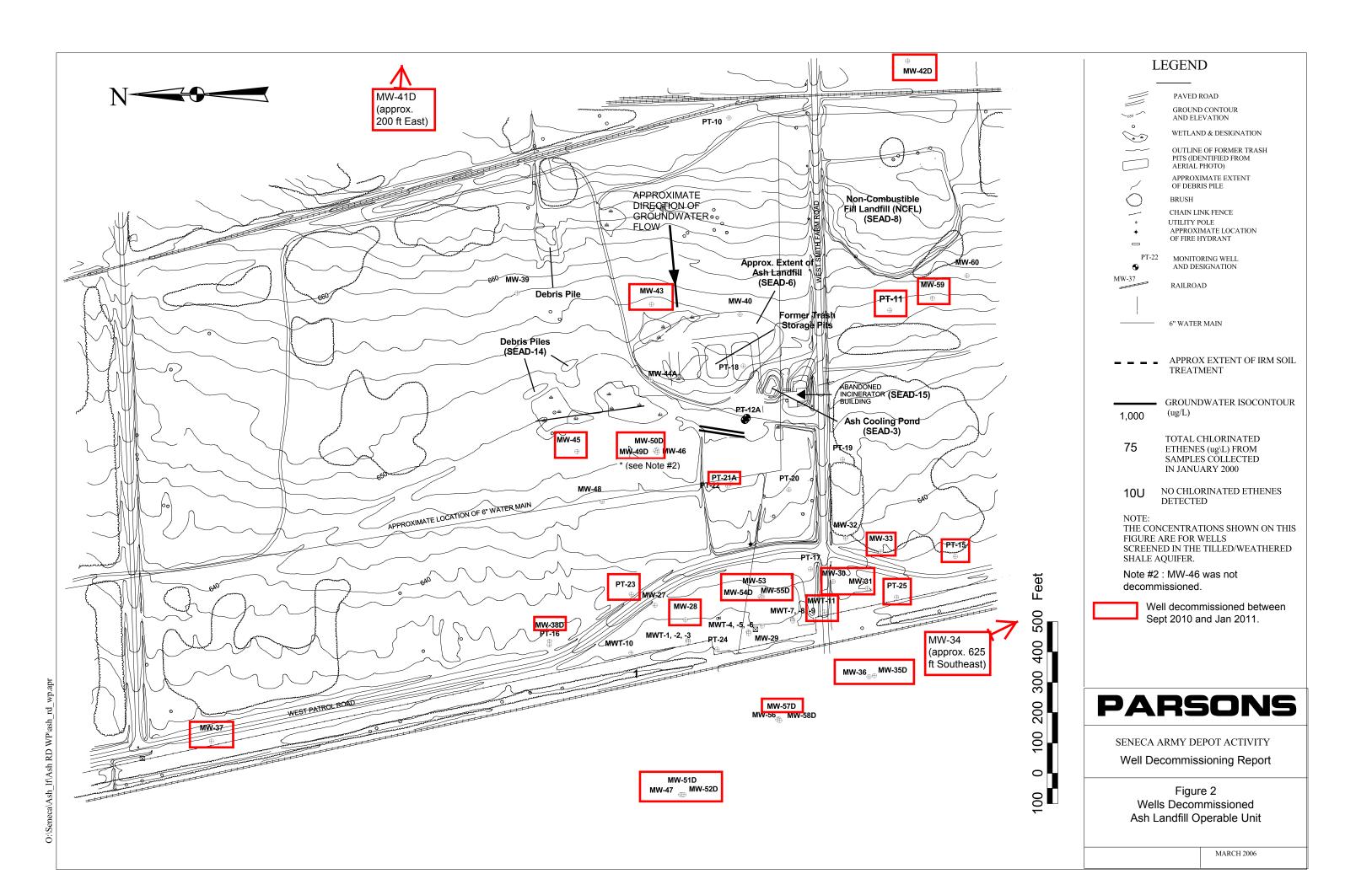
#### **PARSONS**

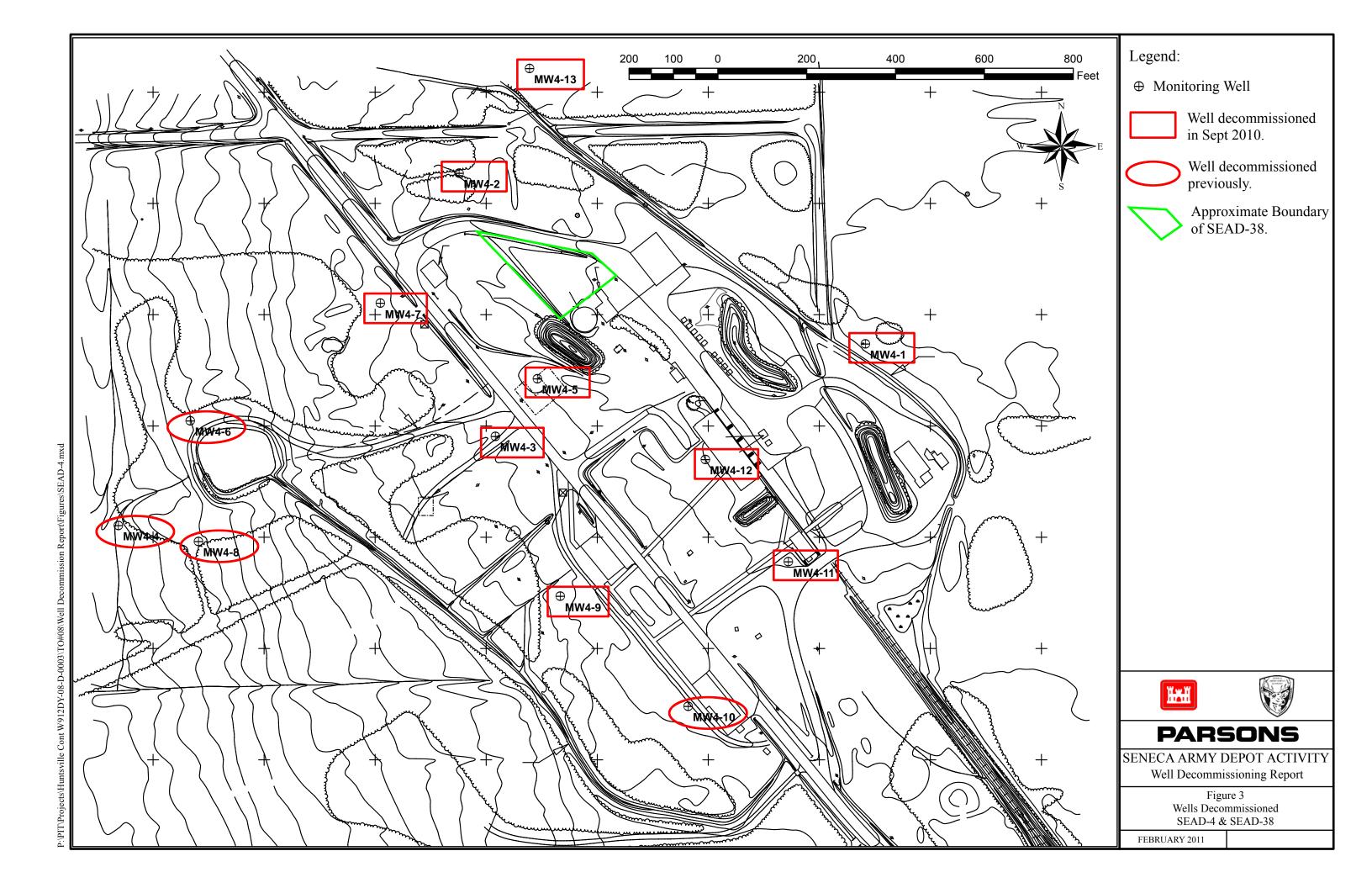
SENECA ARMY DEPOT ACTIVITY Well Decommissioning Report

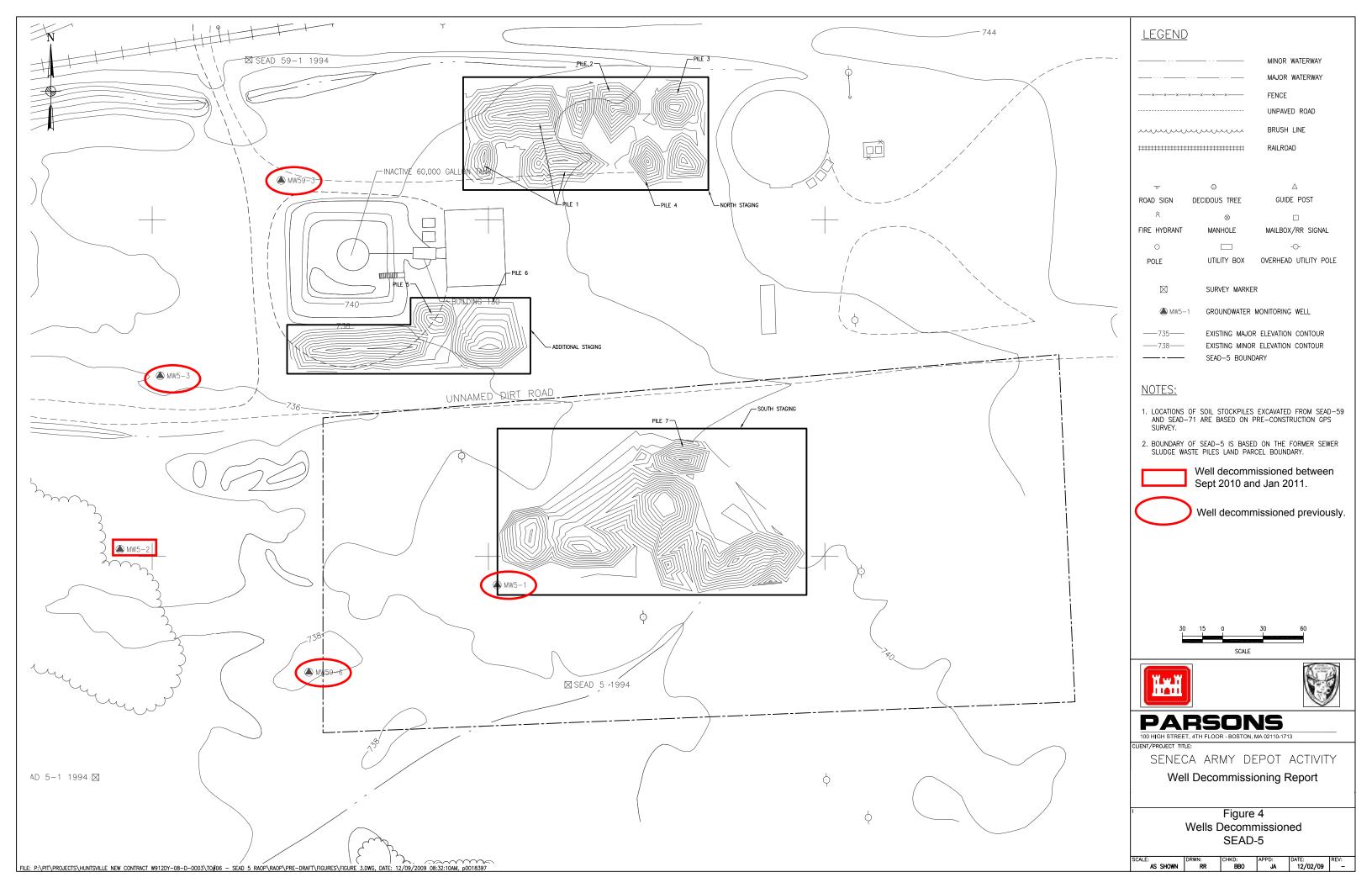
FIGURE 1 Location of SWMUs

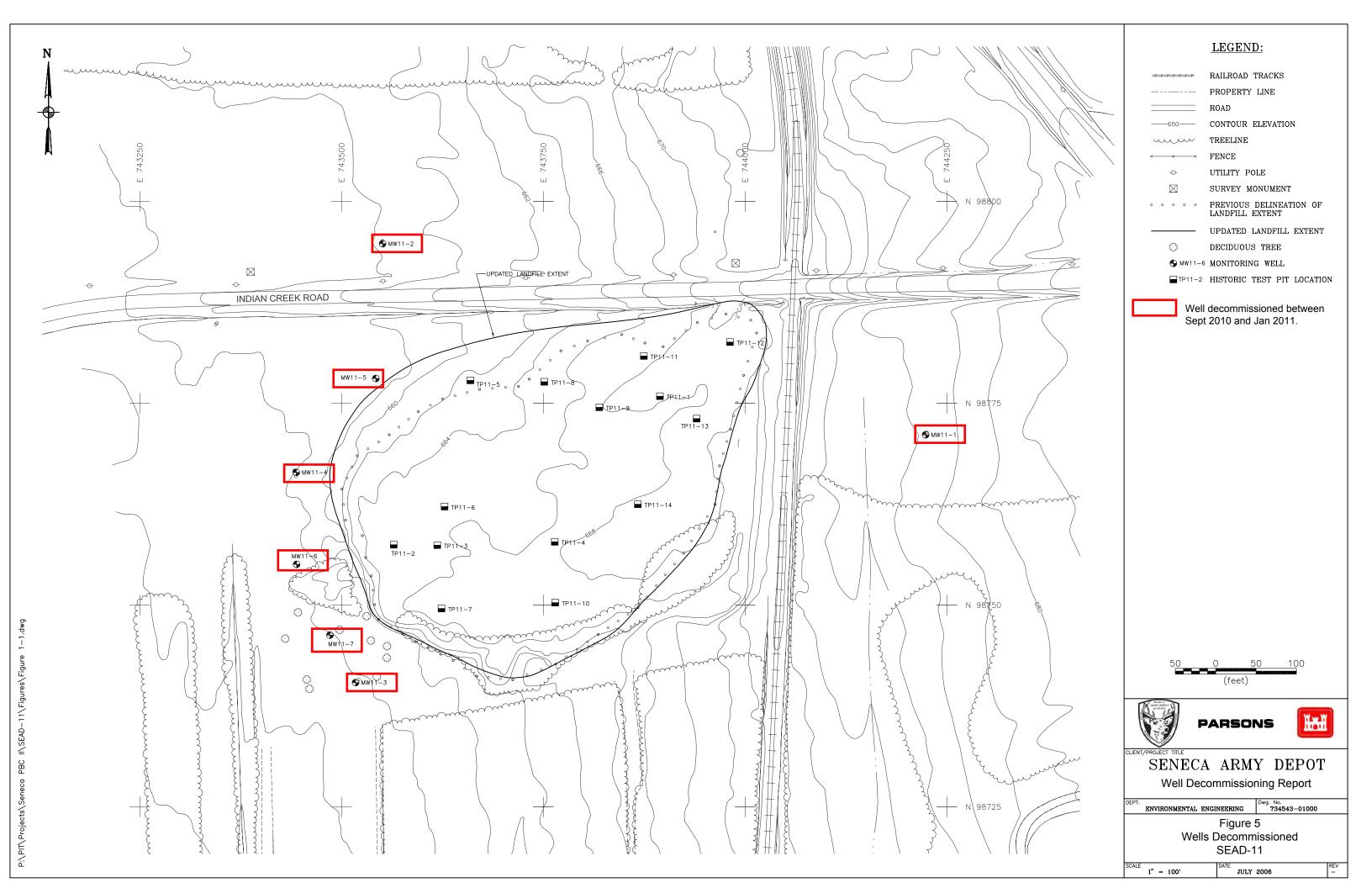
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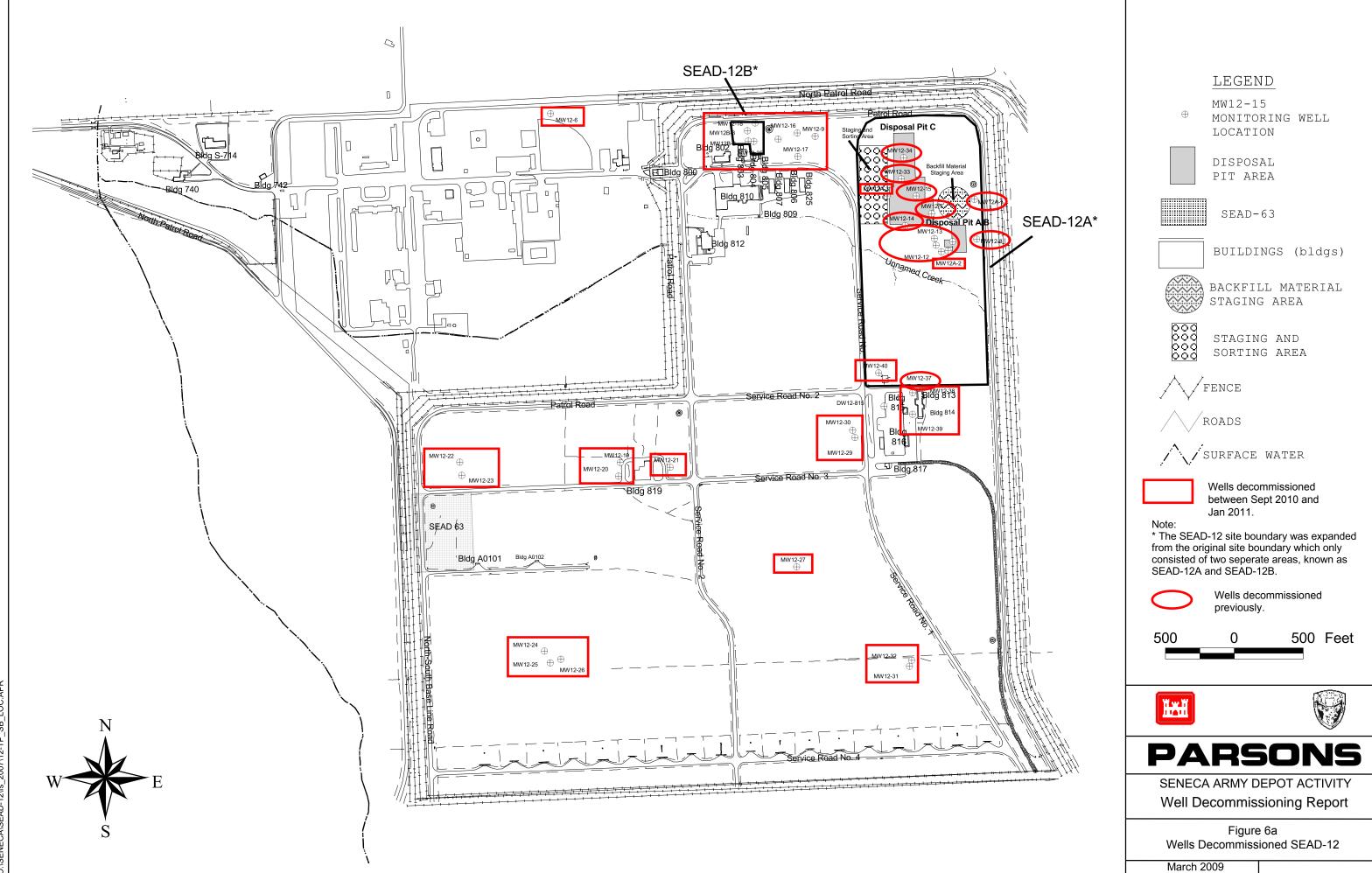
December 2010



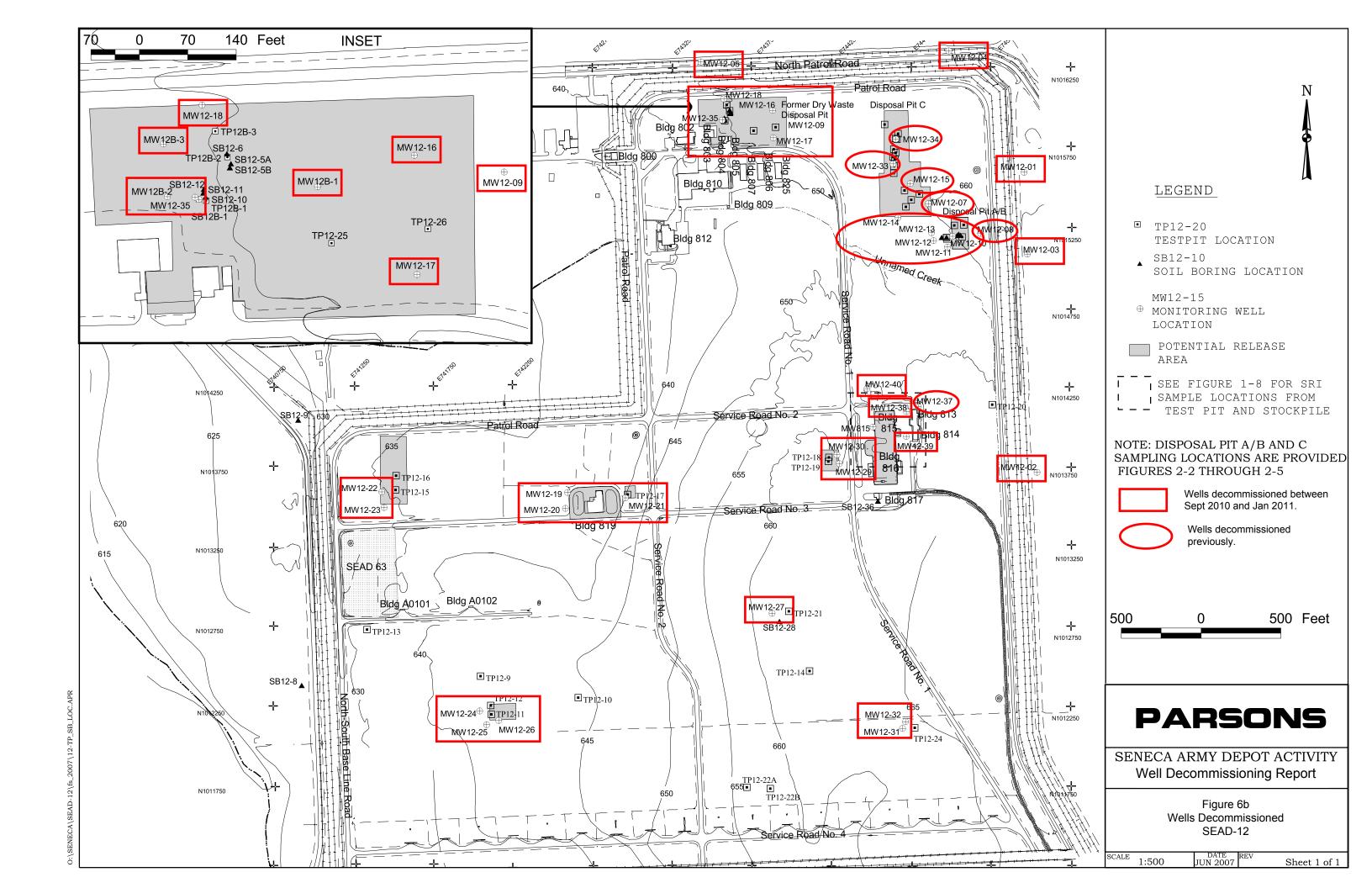


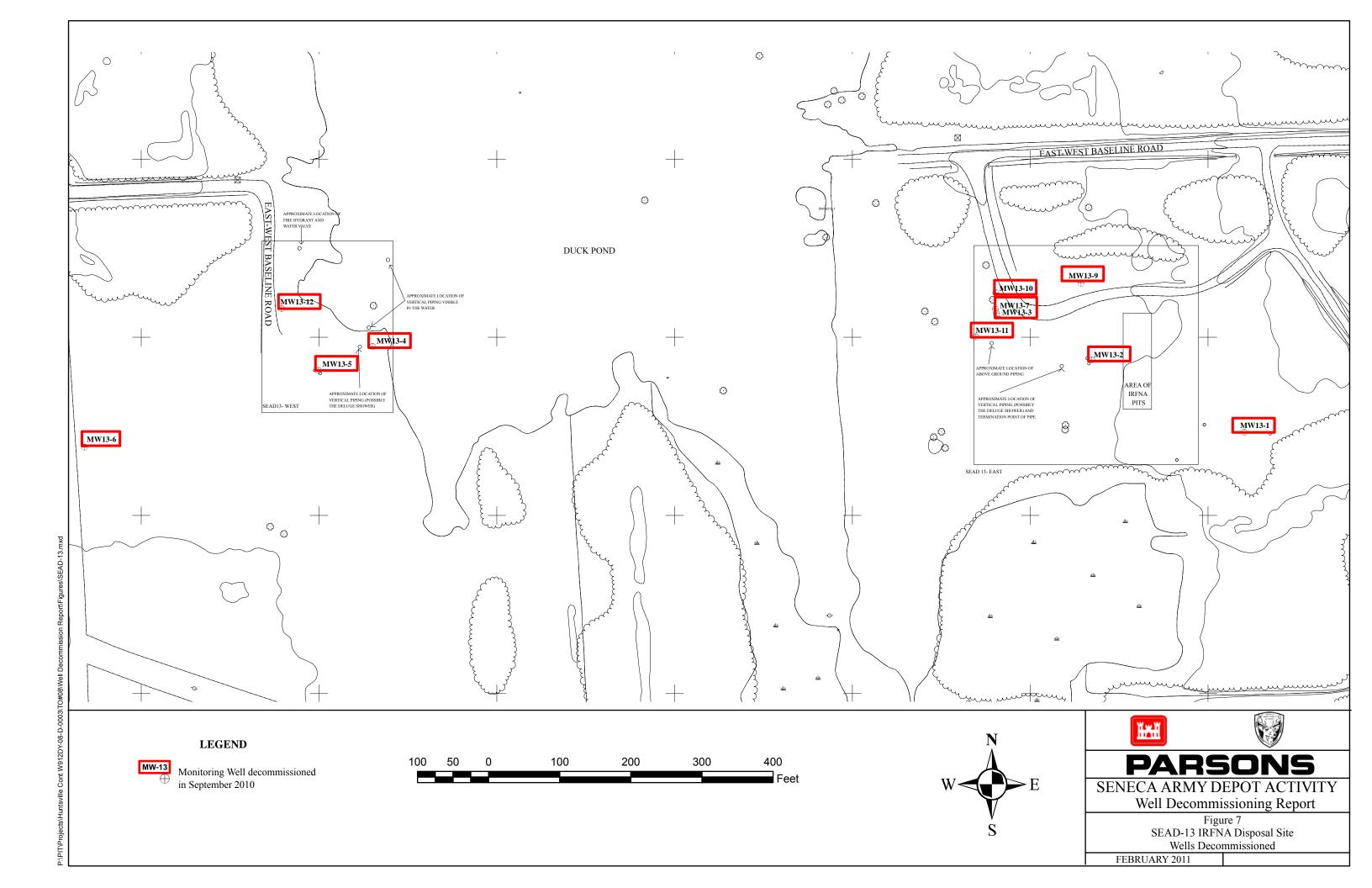


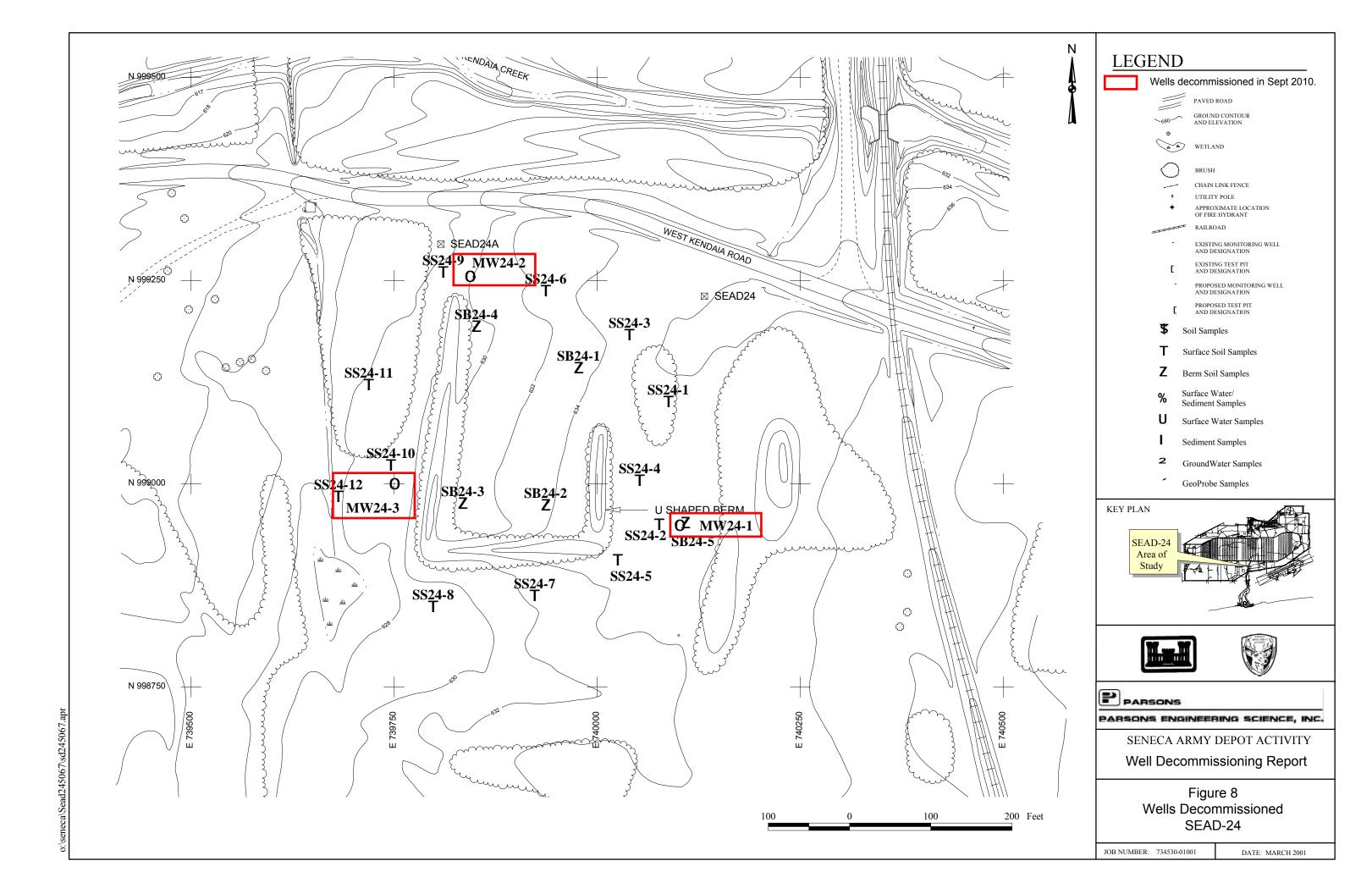


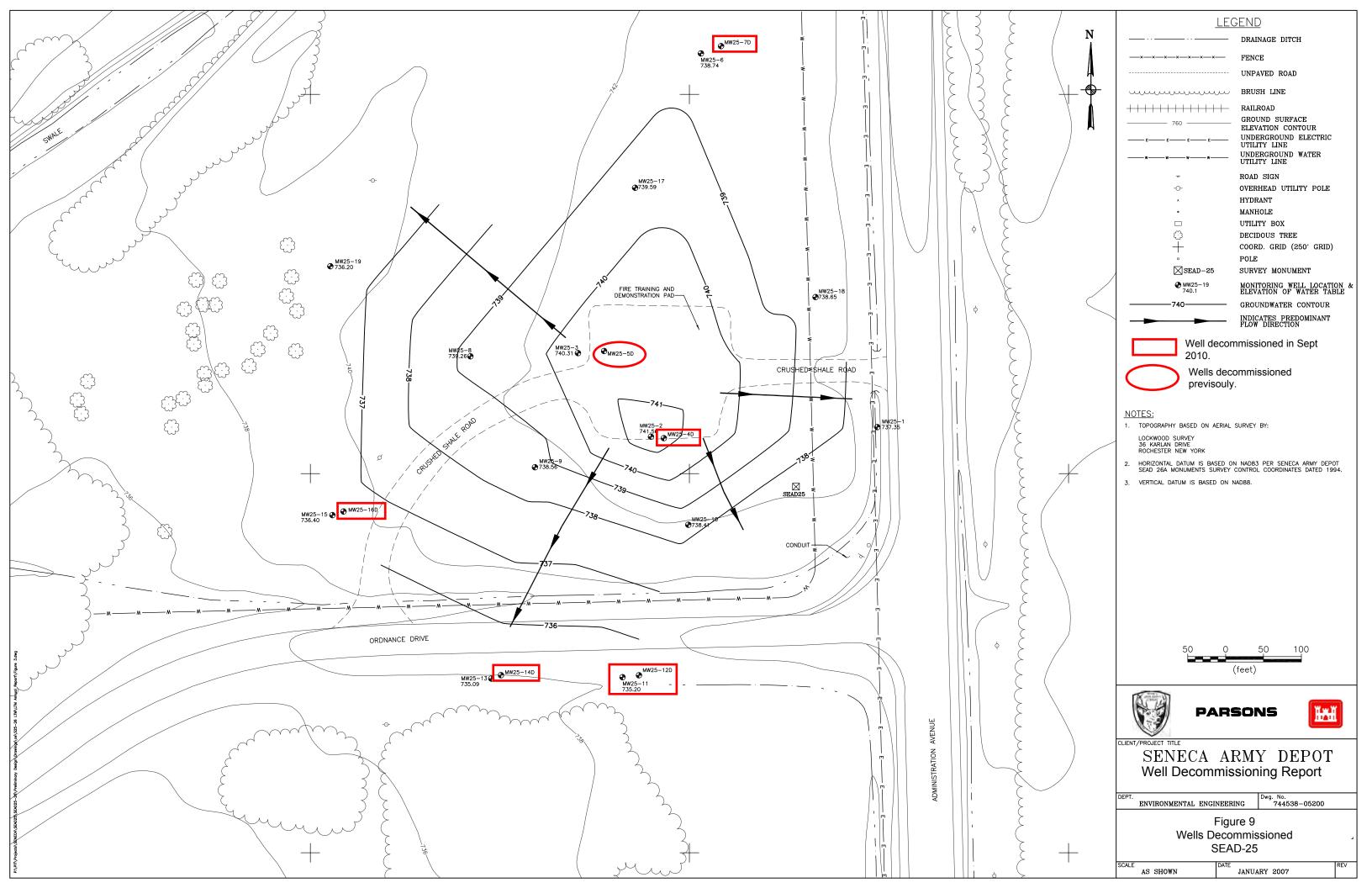


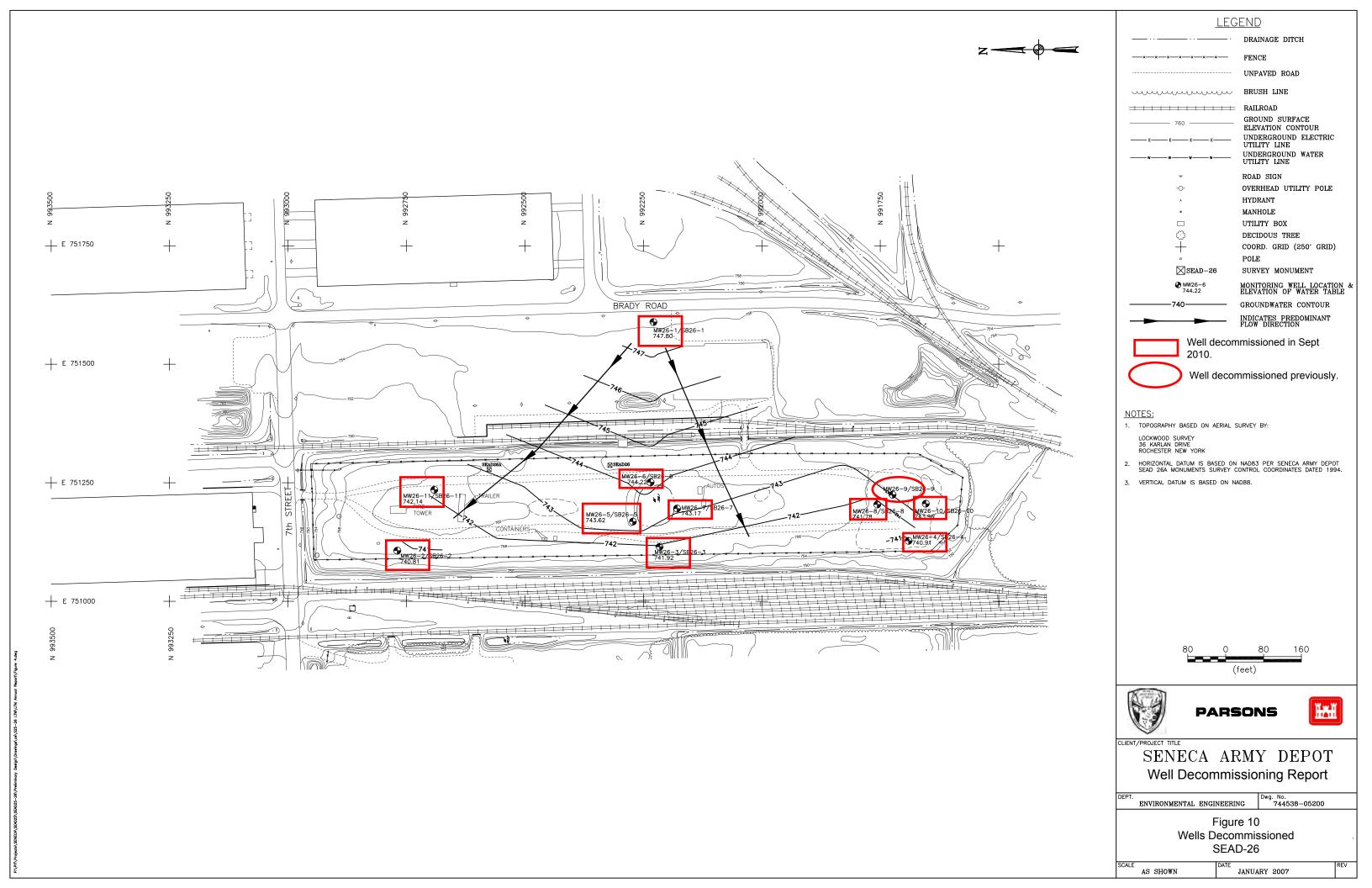
NEC A)SEAD 43% 3007,42 TB SB

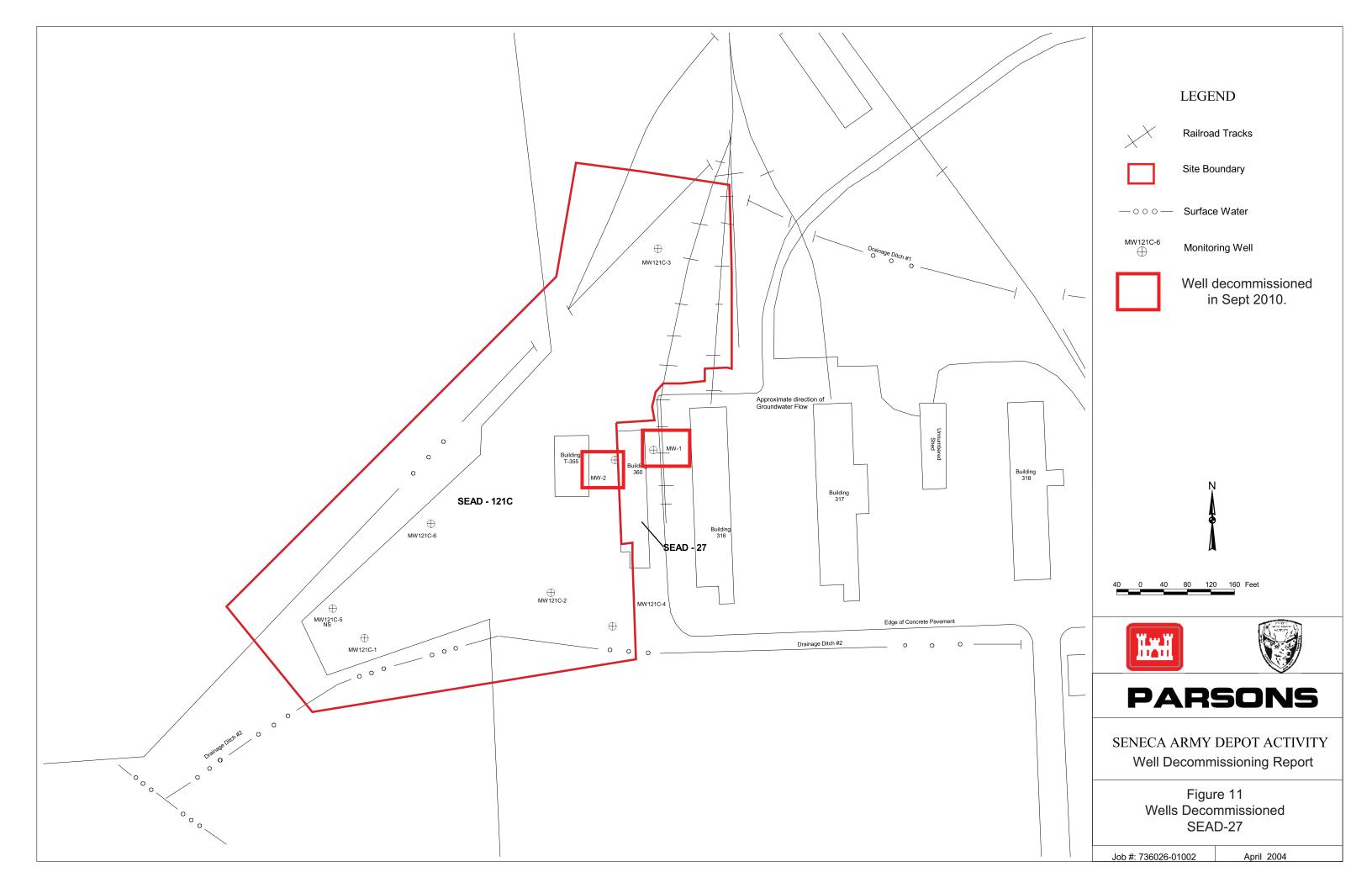


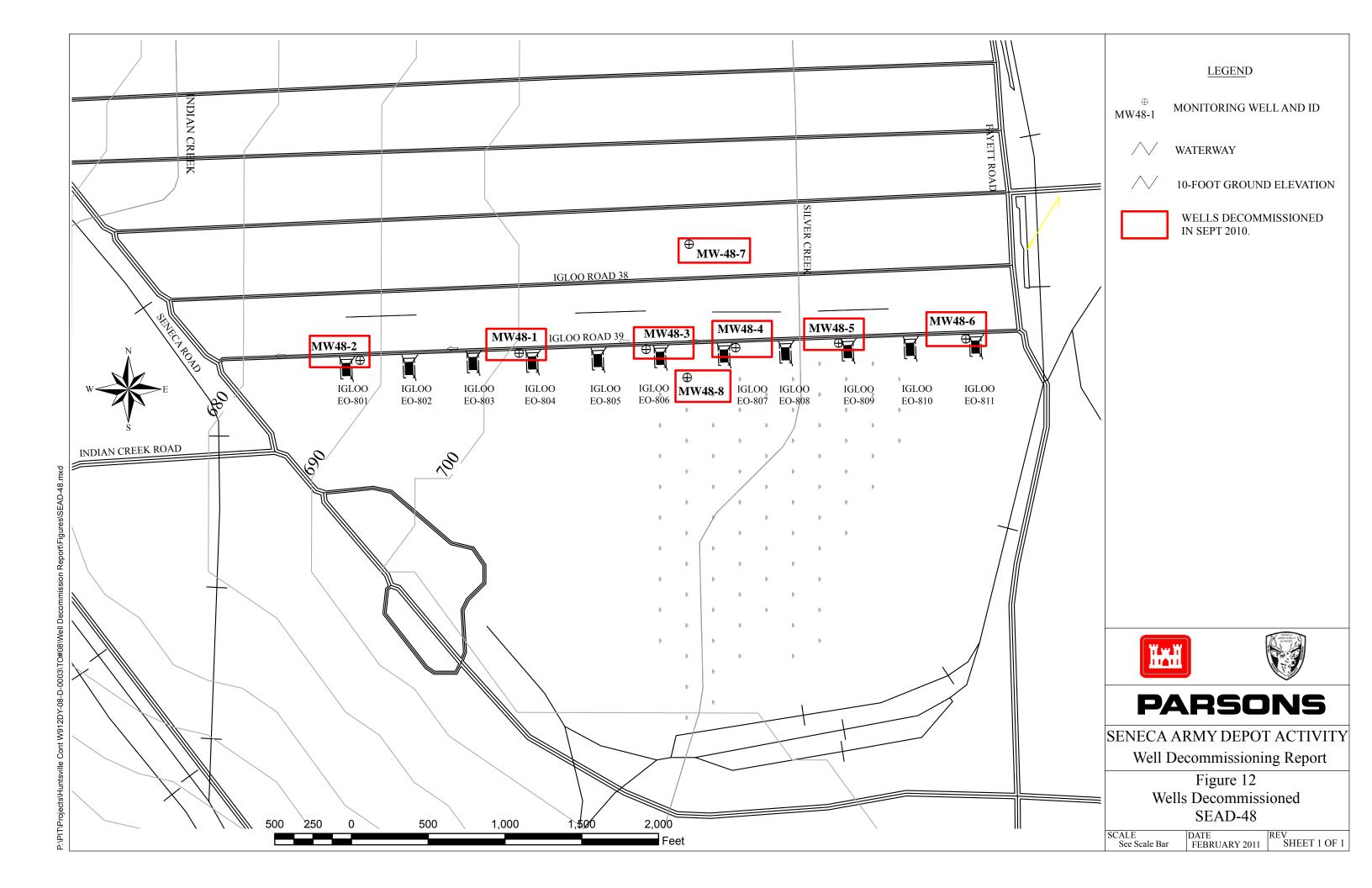


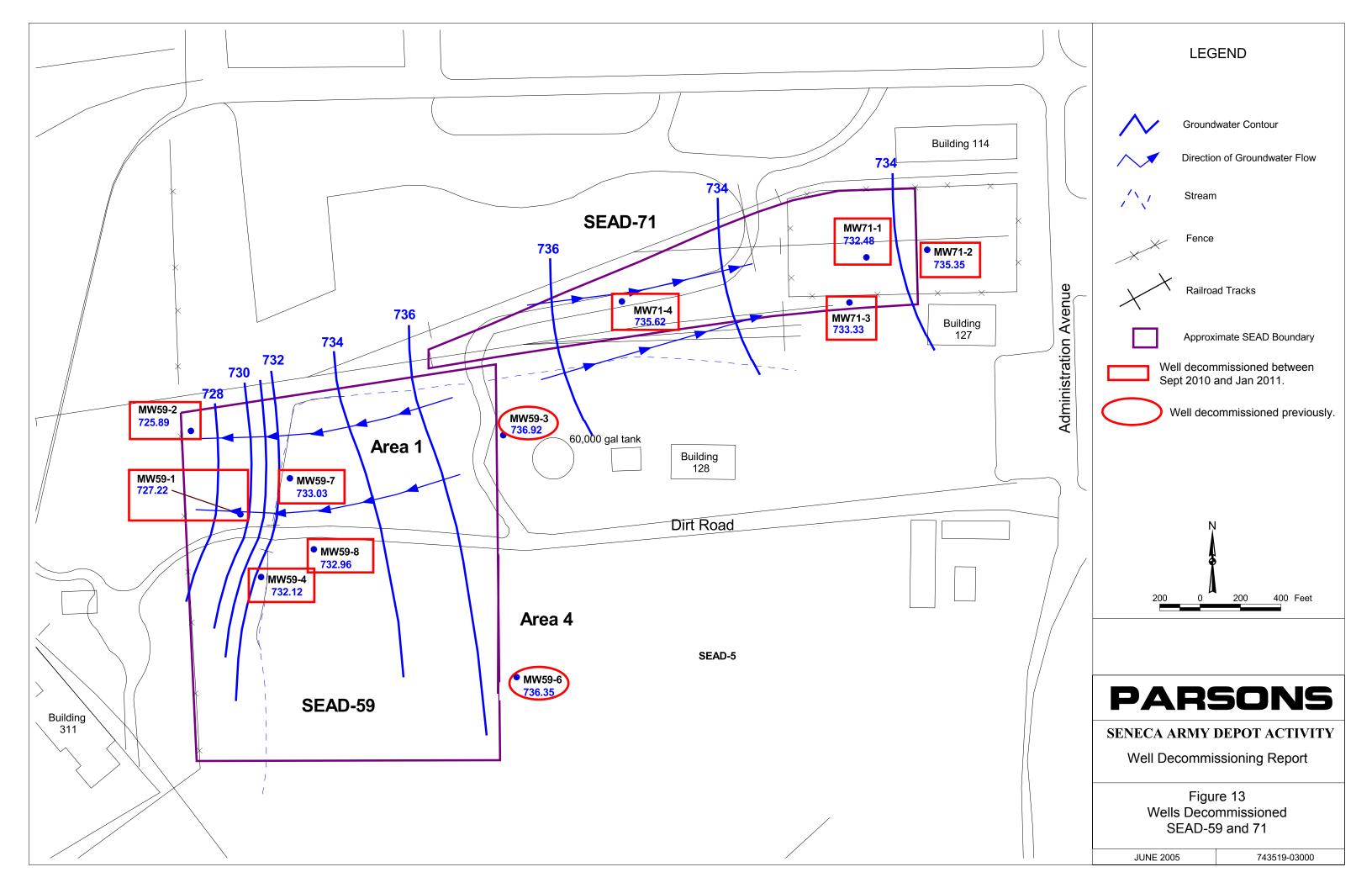


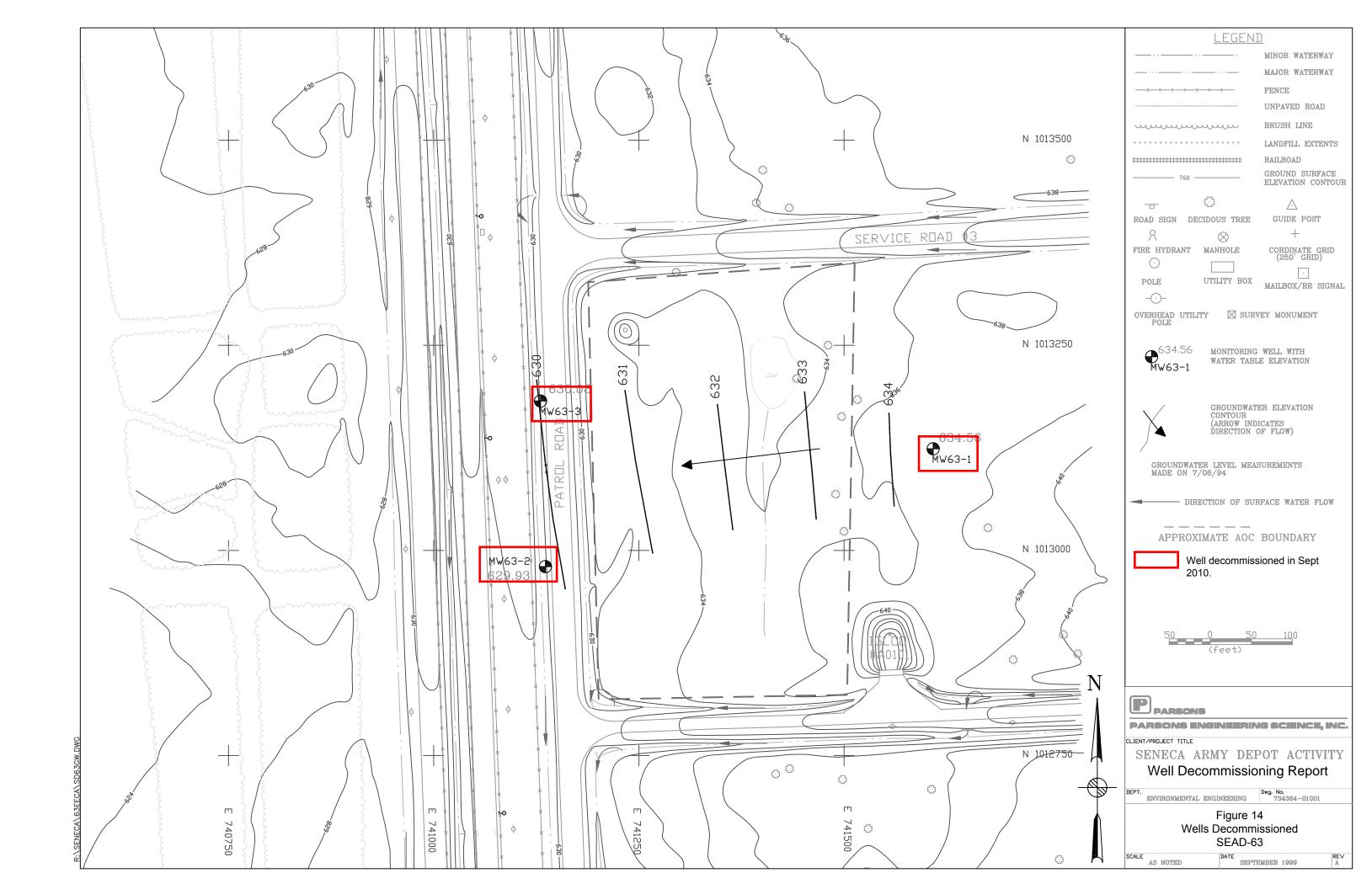


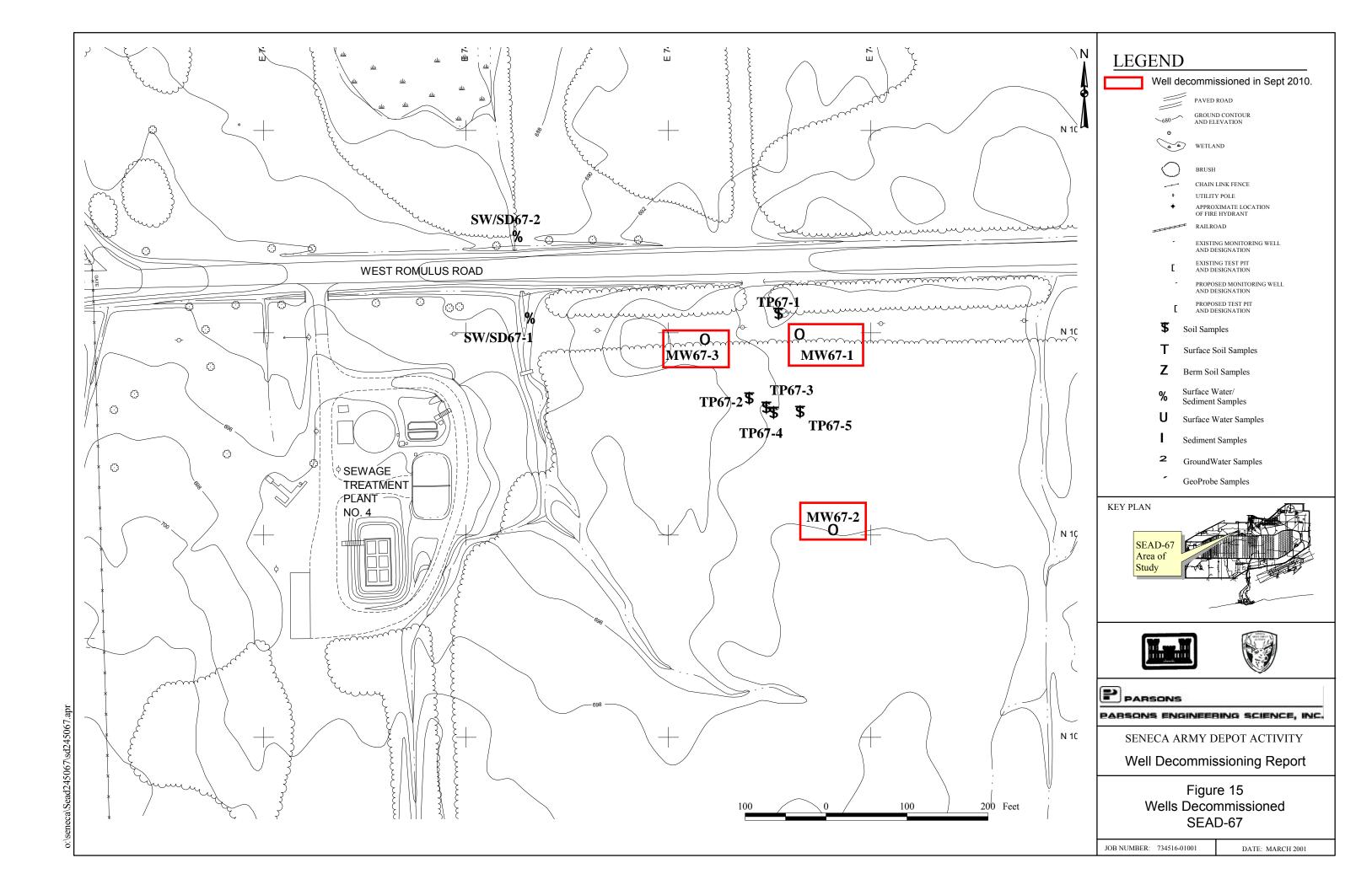


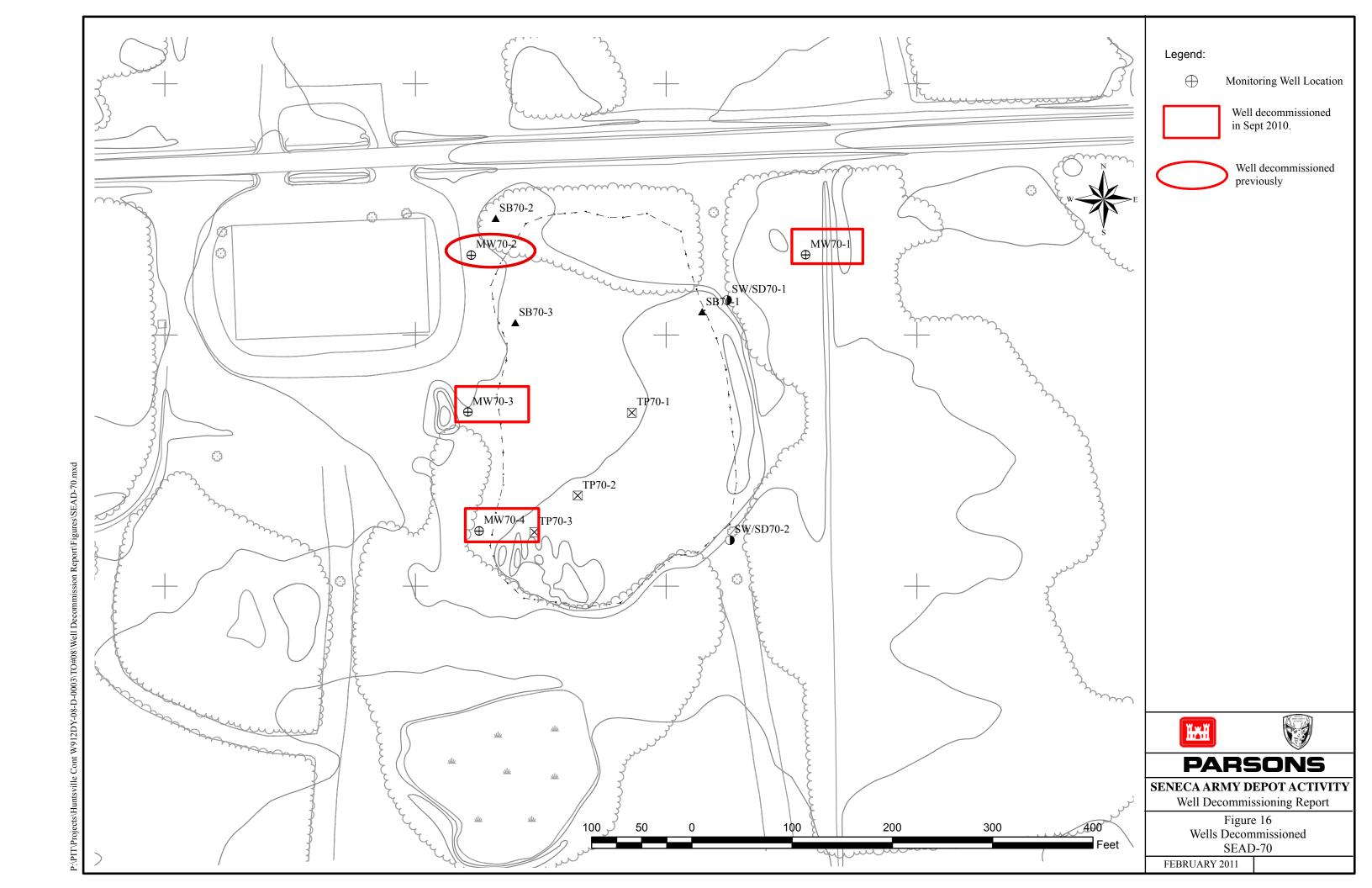




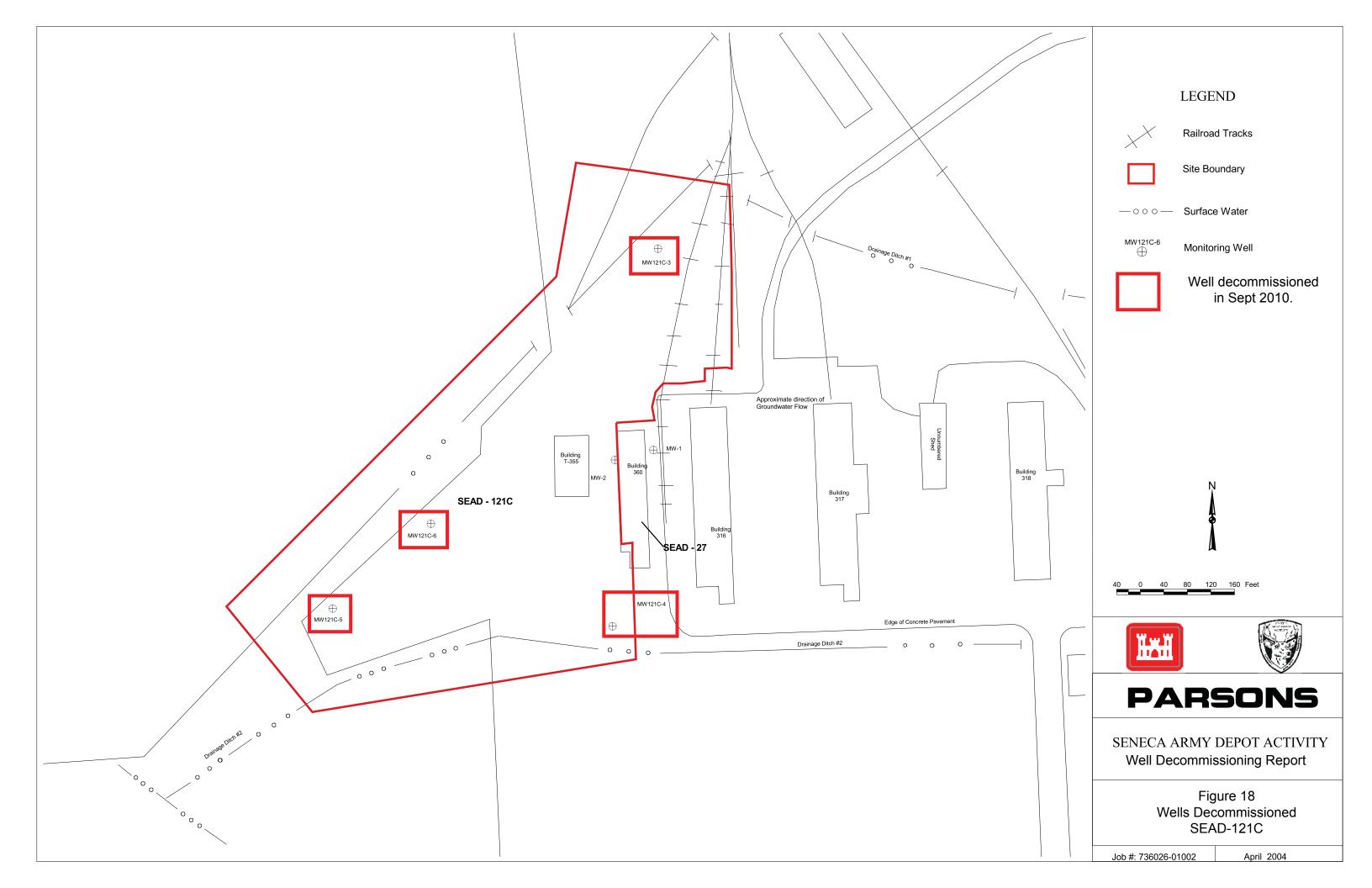


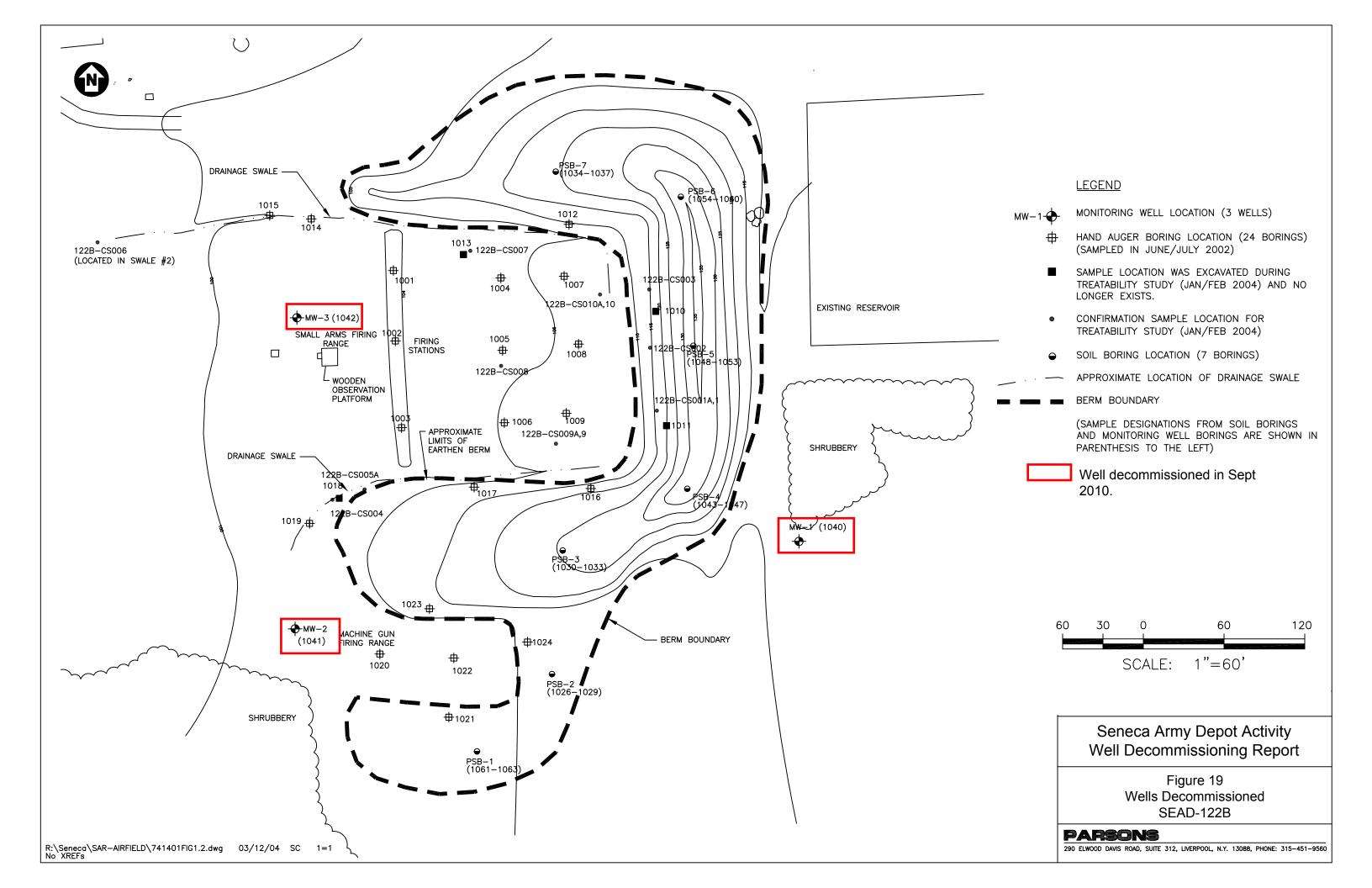












#### **APPENDICES**

Appendix A Boring and Well Completion Logs

Appendix B Notice of Intent to Proceed

Appendix C Well Decommission Record

# APPENDIX A BORING AND WELL COMPLETION LOGS

PROJECT 38-26-0313 88

DATE 13-21 Oct

WELL NUMBER MW-18 MW-19 MW-20 MW-22 1. Height of Monitoring Well 30" 30" 30" 30" 30" Casing above ground level 2. Total Depth of Well below 8' 10" ground level 9 9 9 17' 5" 3. Depth to Top of Well Screen below ground level 4 3' 10" 4 4 12' 5" 4. Well Screen Length 5 5 5 5. Well Screen Slot Size 0.010 0.010 0.010 0.010 0.010 6. Well Diameter 2 in ID 7. Monitoring Well Casing Schd 40 Schd 40 Schd 40 Schd 40 Schd 40 Material PVC PVC PVC PVC PVC 8. Monitoring Well Screen Schd 40 Schd 40 Schd 40 Schd 40 Schd 40 Material PVC PVC PVC PVC PVC 9. Grout Thickness below 3' 10" 4 3' 11' 3 10' 6" ground level 10.Depth to Top of Bentonite Seal below ground level All wells grouted to surface with bencomite 11. Bentonite Seal Thickness 3' 10" 3' 11" 10' 6" 12. Depth to Top of Sand Pack 3' 10" 3' 11" 10' 6" 13. Depth to Static Water Level from top of 5' 11" 5' 51/3" 61 811 6' 6" 18' 85" monitoring well casing Date Measured 19 Oct 87 | 19 Oct 87 | 19 Oct 87 | 19 Oct 87 | 19 Oct 87 14. Depth to Static Water from ground level 654.6 644.0 644.1 645.1 645.8 Date Measured 19 Oct 87 15. Elevation at ground 654.6 644.0 644.1 645.1 645.8 level 16. Elevation - Top of monitoring well casing 17. Ground-water elevation 651.1 641.0 637.4 641.1 629.2 Date Measured 19 Oct 87 Comments

. .

PROJECT 38-26-0313-88 DATE 13-21 Oct 87

|                                                                   | 7              |                | 7              | T              | <del></del> |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|-------------|
| WELL NUMBER                                                       | MW-23          | MW-24          | MW-25          | MW-26          |             |
| 1. Height of Monitoring Well<br>Casing above ground level         | 30"            | 30"            | 30"            | 30"            |             |
| 2. Total Depth of Well below ground level                         | 9'             | 9'             | 9'             | 91             |             |
| 3. Depth to Top of Well Screen below ground level                 | 4'             | 4'             | 4'             | 6'             |             |
| 4. Well Screen Length                                             | 5'             | 5'             | 5'             | 5'             |             |
| 5. Well Screen Slot Size                                          | 0.010"         | 0.010"         | 0.010"         | 0.010"         |             |
| 6. Well Diameter                                                  | 2 in ID        | 2 in ID        | 2 in ID        | 2 in ID        | N 35        |
| 7. Monitoring Well Casing<br>Material                             | Schd 40        | Schd 40<br>PVC | Schd 40<br>PVC | Schd 40        |             |
| 8. Monitoring Well Screen<br>Material                             | Schd 40<br>PVC | Schd 40<br>PVC | Schd 40<br>PVC | Schd 40<br>PVC |             |
| 9. Grout Thickness below ground level                             | 4              | 3              | 4              | 4' 10"         |             |
| 10.Depth to Top of Bentonite<br>Seal below ground level           | All well       | s grouted      | to surface     | with bento     | nite .      |
| ll.Bentonite Seal Thickness                                       | 4              | 3              | 4              | 4' 10"         |             |
| 12.Depth to Top of Sand Pack                                      | 4              | 3              | 4              | 4' 10"         |             |
| 13.Depth to Static Water Level from top of monitoring well casing | 5' 5"          | 4' 9½"         | 5' 8"          | 5' 2"          |             |
| Date Measured                                                     | 19 Oct 87      | 19 Oct 87      | 19 Oct 87      | 19 Oct 87      |             |
| 14.Depth to Static Water from ground level                        | 2' 11"         | 2' 3½"         | 3' 2"          | 2' 8"          |             |
| Date Measured                                                     | 19 Oct 87      | 19 Oct 87      | 19 Oct 87      | 19 Oct 87      |             |
| 15.Elevation at ground level                                      | 638.6          | 633.3          | 634.0          | 617.5          |             |
| 16.Elevation - Top of monitoring well casing                      | ×              |                |                |                |             |
| 17.Ground-water elevation                                         | 635.7          | 631            | 630.8          | 615            |             |
| Date Measured                                                     | 19 Oct 87      | 19 Oct 87      | 19 Oct 87      | 19 Oct 87      |             |
| Comments                                                          | *              |                |                | ·              |             |
|                                                                   |                |                |                |                |             |

PROJECT Seneca Army Depot 38-26-K928-90

Bulking ASS at 1941 A

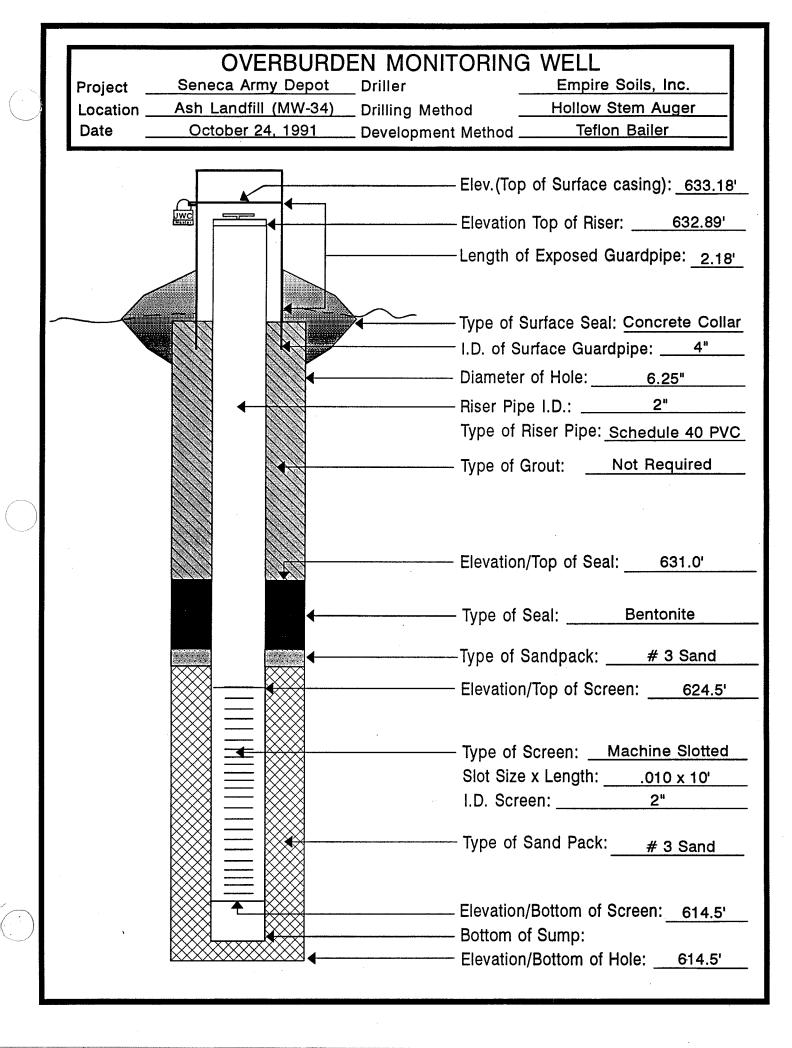
DATE November 1989

| WELL NUMBER                                                       | MW - 27   | MW - 28    | MW - 29    | MW - 30    | MW - 31   |
|-------------------------------------------------------------------|-----------|------------|------------|------------|-----------|
| l. Height of Monitoring Well<br>Casing above ground level         | 2.0'      | 1.9'       | 1.4'       | 3_0'       | 0.8'      |
| 2. Total Depth of Well below ground level                         | 8.0'      | 8.1'       | 8.6'       | 7.0'       | 9.2'      |
| 3. Depth to Top of Well Screen below ground level                 | 3.04      | 3.1'       | 3.6'       | 2.0'       | 4.2'      |
| 4. Well Screen Length                                             | 5.0'      | 5.0'       | 5.0'       | 5.0'       | 5.0'      |
| 5. Well Screen Slot Size                                          | 0.010"    | 0.010"     | 0.010"     | 0.010"     | 0.010"    |
| 6. Well Diameter                                                  | 2.0"      | 2.0"       | 2.0"       | 2.0"       | 2.0"      |
| 7. Monitoring Well Casing Material                                | PVC       | PVC .      | PVC        | PVC        | PVC       |
| 8. Monitoring Well Screen<br>Material                             | PVC       | PVC        | PVC        | PVC        | PVC       |
| 9. Grout Thickness below ground level                             | ALL WELL  | s GROUTED  | CO SURFACE | WITH BENTO | VITE:     |
| 10.Depth to Top of Bentonite<br>Seal below ground level           | . 0       | 0          | 0          | .a. O      | . 0       |
| 11.Bentonite Seal Thickness                                       | 3.0'      | 3.1'       | 3.6'       | 2.0'       | 4.2'      |
| 12.Depth to Top of Sand Pack                                      | 3.0'      | 3.1'       | 3.6'       | 2.0'       | 4.2'      |
| 13.Depth to Static Water Level from top of monitoring well casing | 5.0'      | 4.65'      | 6.1'       | 4.2'       | 2.7"      |
| Date Measured                                                     | 17 Nov 89 | 17 Nov. 89 | 17 Nov 89  | 17 Nov 89  | 17 Nov 89 |
| _14.Depth to Static Water from ground level                       |           |            |            |            | e ,m      |
| . Date Measured                                                   |           |            |            |            |           |
| 15.Elevation at ground level                                      | •3        |            |            |            | r i.      |
| 16.Elevation - Top of monitoring well casing                      | 638.38    | 636.46     | 636.42     | 639.41     | 635.88    |
| 17.Ground-water elevation                                         | 633.38    | · 631.81   | 630.32     | 635.21     | 633.18    |
| Date Measured                                                     | 17 Nov 89 | 17 Nov 89  | 17 Nov 89  | 17 Nov 89  | 17 Nov 89 |
| Comments                                                          |           |            |            |            |           |
|                                                                   |           |            |            |            |           |
| =                                                                 | · ·       |            | •          |            |           |

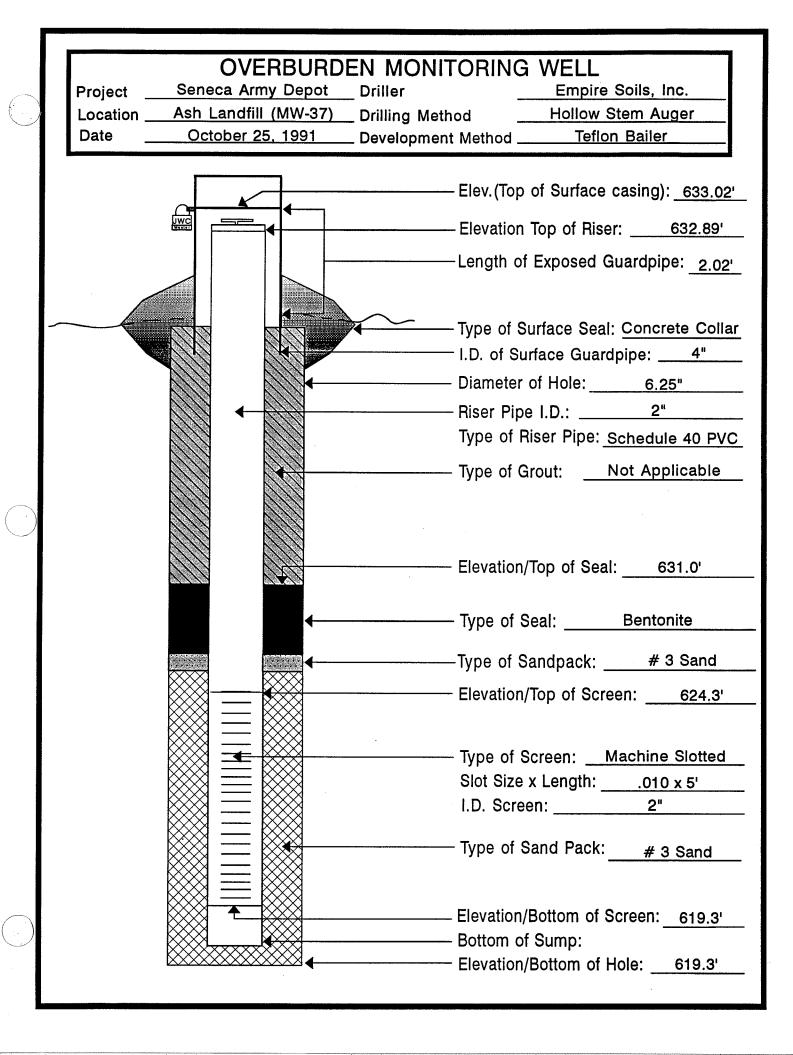
AEHA Form 93-R, 1 JUN 88

PROJECT Seneca Army Depot 38-26-K928-90 DATE November 1989

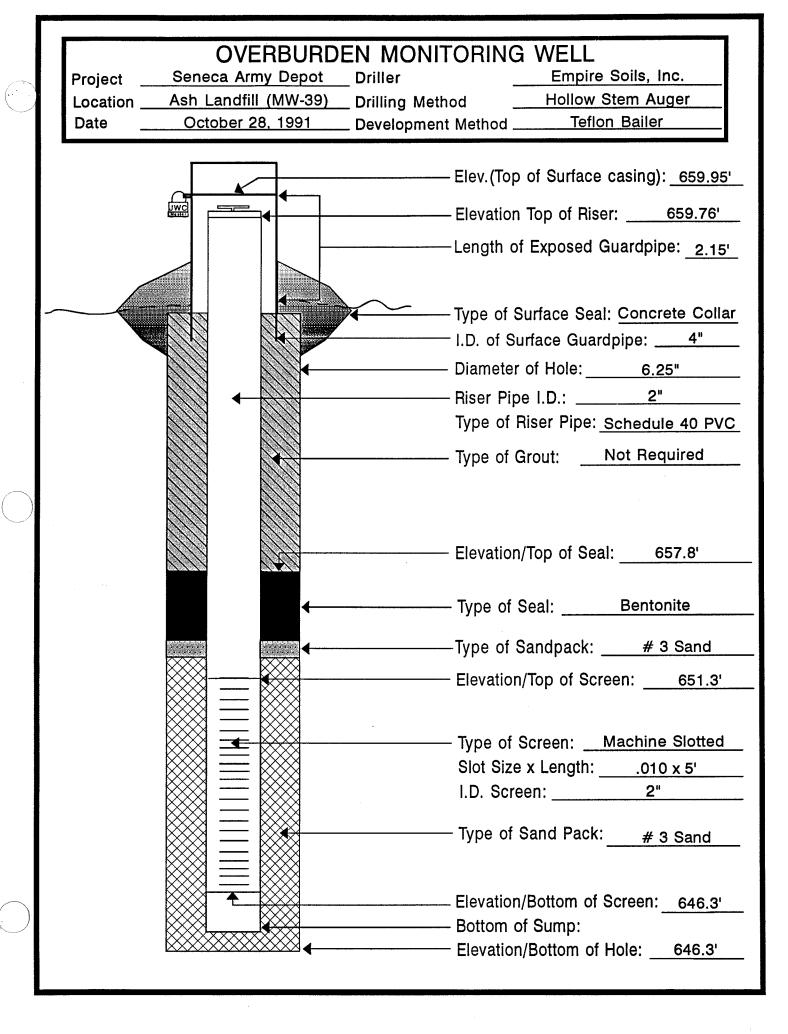
| WELL NUMBER                                                       | MW - 32             | MW - 33   |          |    |     |
|-------------------------------------------------------------------|---------------------|-----------|----------|----|-----|
| l. Height of Monitoring Well<br>Casing above ground level         | .1.3'               | 1.5'      |          | -  | •   |
| 2. Total Depth of Well below ground level                         | 8.7'                | 8.5'      | #C:      |    |     |
| 3. Depth to Top of Well Screen below ground level                 | 3.7'                | 3.5'      |          |    | :•0 |
| 4. Well Screen Length                                             | 5.0'                | 5.0'      |          |    |     |
| 5. Well Screen Slot Size                                          | 0.010"              | 0.010"    |          |    |     |
| 6. Well Diameter                                                  | 2.0"                | 2.0"      |          |    |     |
| 7. Monitoring Well Casing Material                                | PVC                 | PVC .     |          | 2: | **  |
| 8. Monitoring Well Screen Material                                | PVC .               | PVC       |          |    |     |
| 9. Grout Thickness below ground level                             | ALL WELL<br>SURFACE | GROUTED T | O<br>ITE |    |     |
| 10.Depth to Top of Bentonite Seal below ground level              | . 0                 | 0         |          | *  |     |
| 11.Bentonite Seal Thickness                                       | 3.7'                | 3.5'      |          |    |     |
| 12.Depth to Top of Sand Pack                                      | 3.7'                | 3.5'      |          |    |     |
| 13.Depth to Static Water Level from top of monitoring well casing | 3.8'                | 3.5'      |          |    |     |
| Date Measured                                                     | 17 Nov 89           | 17 Nov 89 |          |    |     |
| 14.Depth to Static Water from ground level                        |                     |           |          |    |     |
| T Date Measured                                                   | •                   |           |          |    |     |
| 15.Elevation at ground<br>level                                   |                     |           |          |    | · . |
| 16.Elevation - Top of monitoring well casing                      | 640.92              | 638.68    |          |    |     |
| 17.Ground-water elevation                                         | 637.12              | 635.18    |          |    |     |
| Date Measured                                                     | 17 Nov 89           | 17 Nov 89 |          | Д. | 4 4 |
| Comments                                                          |                     | 41        |          |    | 1.0 |
|                                                                   |                     |           |          |    | nor |
|                                                                   | 1 .                 |           |          | 1  |     |

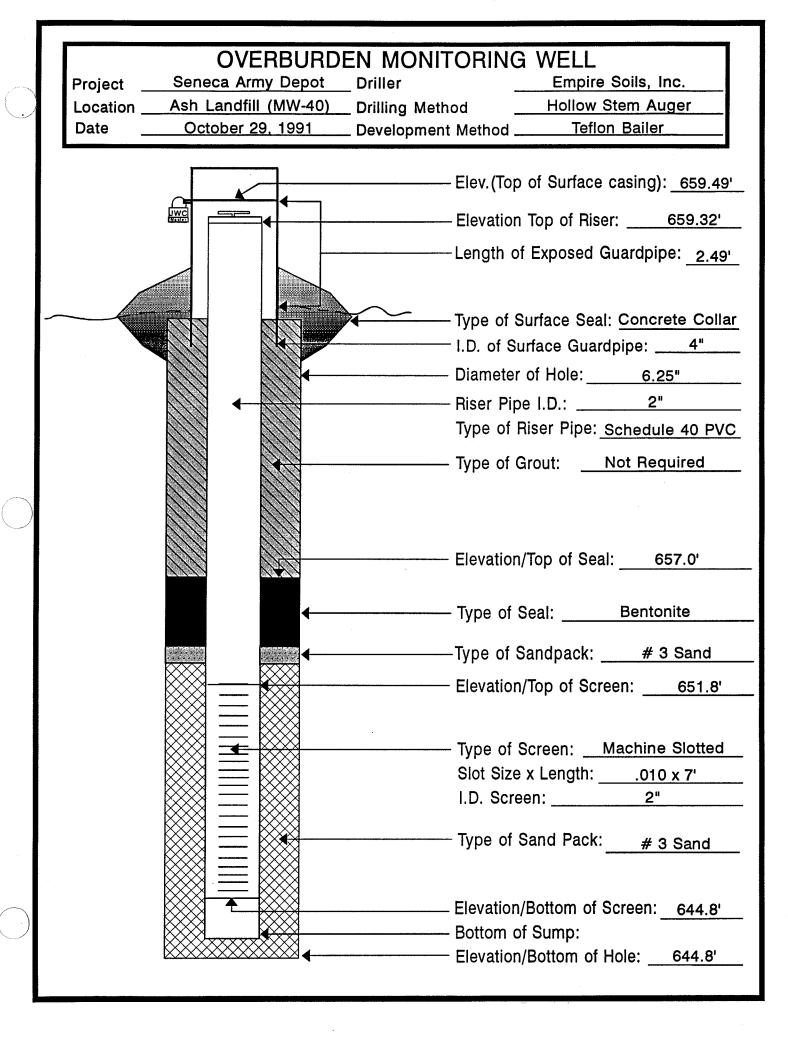


|     | OVERBURDEN MONITORING WELL |                      |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|-----|----------------------------|----------------------|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| ~~~ | Project _                  | Seneca Army Depot    | Driller                                                      | Empire Soils, Inc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |
|     | Location _                 | Ash Landfill (MW-36) |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|     | Date _                     | October 30, 1991     | Development Method                                           | Teflon Bailer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|     |                            |                      | Elev. (To Elevatio Length Type of I.D. of S Diamete Riser Pi | p of Surface casing): 632.04' In Top of Riser: 631.73' In Top of Riser: |  |  |
|     |                            |                      | Type of                                                      | n/Top of Seal:630.1'  Seal:Bentonite  Sandpack:# 3 Sand  n/Top of Screen:625.3'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|     |                            |                      | Type of Slot Size I.D. Scr Type of Elevation Bottom          | Screen: Machine Slotted e x Length: .010 x 10' een: 2"  Sand Pack: # 3 Sand  n/Bottom of Screen: 615.3'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |



|                                                                           |                       | K MONITORING                                                                                                                                                                                                                                     | WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project _                                                                 | Seneca Army Depot     |                                                                                                                                                                                                                                                  | Empire Soils, Inc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Location _                                                                | Ash Landfill (MW-38D) | _ Drilling Method                                                                                                                                                                                                                                | Hol.Stem Auger/Air Rotary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Date _                                                                    | November 6, 1991      | _ Development Method                                                                                                                                                                                                                             | Teflon Bailer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Overburden Surface Competent Bedrock ———————————————————————————————————— |                       | Elevation  Length  Elevation  Type of  I.D. of  Diamet  Riser For  Type of  PVC I.I.  Type of  Elevation  Type of  Slot Sin  I.D. So  Diamet  Core/For  Elevation  Elevation  Elevation  Type of  Slot Sin  I.D. So  Diamet  Core/For  Elevation | op of Surface casing): 638.04' on Top of Riser: 637.93' of Exposed Guardpipe: 2.64' on/Ground Surface: 635.4' if Surface Seal: Concrete Collar Surface Guardpipe: 4" er of Hole: 10.25" Pipe I.D.: 2" if Riser Pipe: Schedule 40 PVC if Grout: Cement/Bentonite D. (Surface to Bedrock): 6" if Grout (outside PVC): Cem./Bent. on/Depth Top of Seal: 630.5' of Seal: Bentonite on/Depth Top of Screen: 625.7' of Screen: Machine Slotted ze x Length: .010 x 20' creen: 2" of Sand Pack: #3 Sand der of Hole in Bedrock: 6.25" on/Bottom of Screen: 605.7' on/Bottom of Hole: 605.4' |



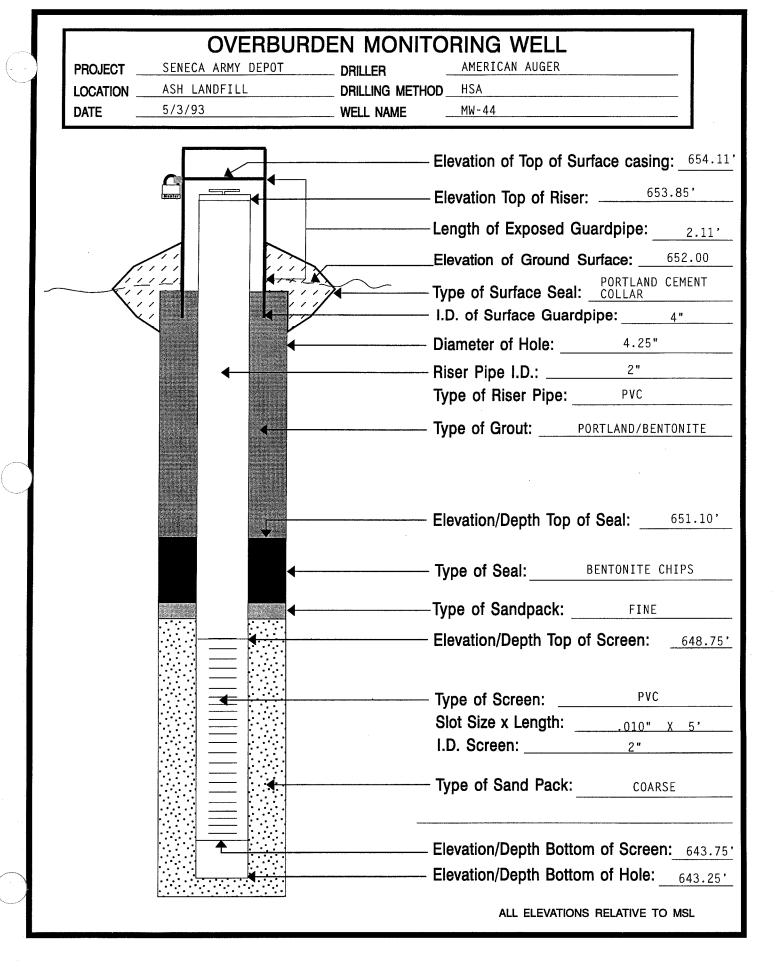


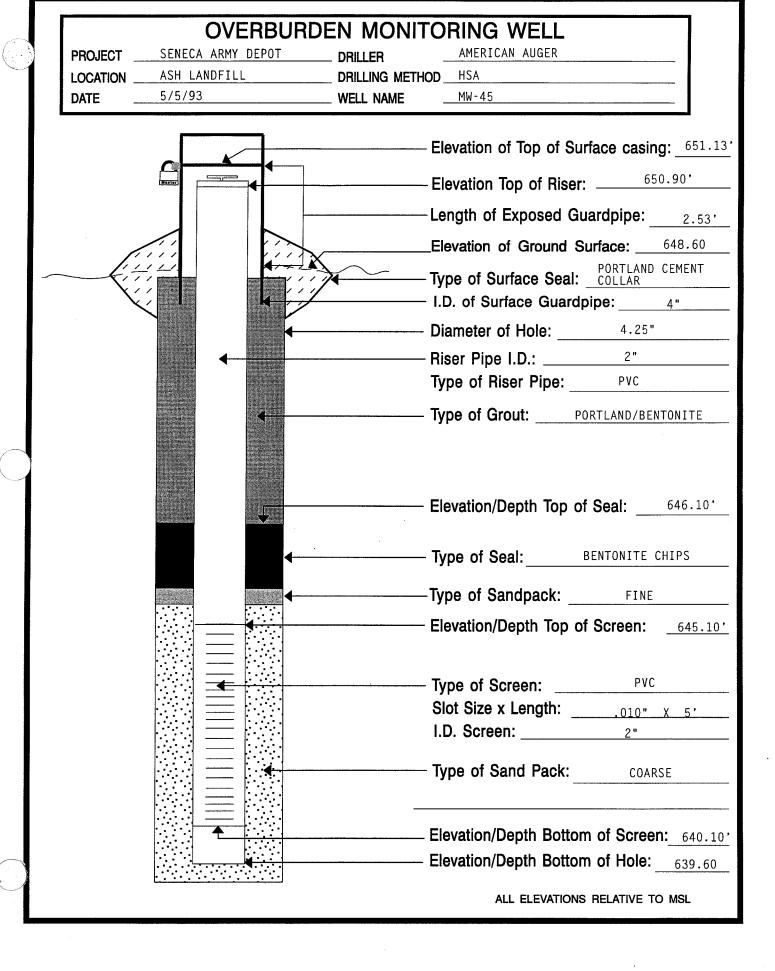
|     | BEDROCK MONITORING WELL                                           |                   |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
|-----|-------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|     | Project _                                                         | Seneca Army Depot | _ Driller                                                                                                                                                                                                                                        | Empire Soils, Inc.                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|     | Location _                                                        |                   | _ Drilling Method                                                                                                                                                                                                                                | Hol.Stem Auger/Air Rotary                                                                                                                                                                                                                                                                                                                                                                           |  |  |
|     | Date _                                                            | November 6, 1991  | _ Development Method                                                                                                                                                                                                                             | Teflon Bailer                                                                                                                                                                                                                                                                                                                                                                                       |  |  |
| Wea | Overburden Competent Bedrock ———————————————————————————————————— |                   | Elevation  Length  Elevation  Type of  I.D. of  Diamet  Riser For  Type of  PVC I.I.  Type of  Elevation  Type of  Slot Six  I.D. So  Diamet  Core/Fix  Elevation  Elevation  Elevation  Type of  Slot Six  I.D. So  Diamet  Core/Fix  Elevation | op of Surface casing): _694.04' on Top of Riser:694.02' of Exposed Guardpipe: _2.44' on/Ground Surface:691.6' of Surface Seal: _Concrete Collar Surface Guardpipe:4" er of Hole:10.25" on/Eren:2" on/Complete Top of Seal:682.8' on/Depth Top of Screen:677.1' on/Depth Top of Screen:677.1' on/Depth Top of Screen:677.1' on/Sand Pack:83 Sand on/Bottom of Screen:647.1' on/Bottom of Hole:646.6' |  |  |

|      |                                                                          |                                           | CK MONITORING                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|--------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -    | Project _                                                                | Seneca Army Depot                         | Driller                                                                                                                                                             | Empire Soils, Inc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|      | Location _                                                               | Ash Landfill (MW-42D)<br>November 8, 1991 |                                                                                                                                                                     | Hol.Stem Auger/Air Rotary Teflon Bailer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|      | Date _                                                                   | 11010111201 0, 1001                       | Development Method                                                                                                                                                  | a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Weat | Overburden / Sime Competent Bedrock ———————————————————————————————————— |                                           | Elevat Lengti Elevat Type of I.D. o Diame Riser Type of PVC I Type of Elevat  Type of Elevat  Type Elevat  Type Elevat  Type Slot S I.D. S  Type Diame Core/ Elevat | Top of Surface casing): _683.18'  tion Top of Riser:683.04' h of Exposed Guardpipe: _2.48'  tion/Ground Surface:680.7' of Surface Seal: _Concrete Collar f Surface Guardpipe:4"  eter of Hole:10.25"  Pipe I.D.:2" of Riser Pipe: _Schedule 40 PVC of Grout:Cement/Bentonite  D. (Surface to Bedrock):6" of Grout (outside PVC): Cem./Bent tion/Depth Top of Seal:661.9'  of Seal:Bentonite tion/Depth Top of Screen:656.0'  of Screen:2"  of Sand Pack:43 Sand  eter of Hole in Bedrock: Rock:636.0' tion/Bottom of Screen:636.0' tion/Bottom of Hole:635.7' |

#### SENECA ARMY DEPOT DRILLER AMERICAN AUGER PROJECT ASH LANDFILL DRILLING METHOD \_\_\_HSA LOCATION 5/3/93 MW-43 DATE WELL NAME Elevation of Top of Surface casing: 657.90 - Elevation Top of Riser: \_\_\_\_\_657.73' -Length of Exposed Guardpipe: \_\_\_\_\_2.30 Elevation of Ground Surface: 655.60 Type of Surface Seal: PORTLAND CEMENT COLLAR I.D. of Surface Guardpipe: Diameter of Hole: \_\_\_\_\_4.25" Riser Pipe I.D.: 2" Type of Riser Pipe: PVC Type of Grout: PORTLAND/BENTONITE Elevation/Depth Top of Seal: 653.50' - Type of Seal: BENTONITE CHIPS -Type of Sandpack: \_\_\_\_\_FINE Elevation/Depth Top of Screen: Type of Screen: I.D. Screen: 2" - Type of Sand Pack: COARSE \_ Elevation/Depth Bottom of Screen: 650.6 — Elevation/Depth Bottom of Hole: 650.1 ALL ELEVATIONS RELATIVE TO MSL

OVERBURDEN MONITORING WELL





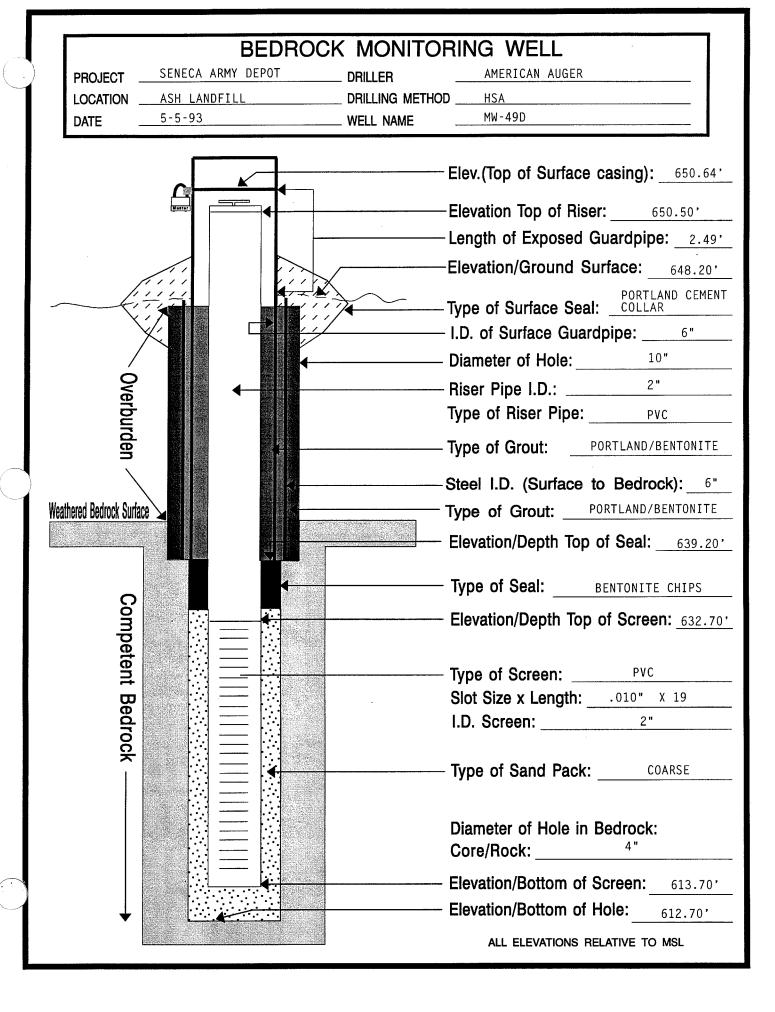
#### SENECA ARMY DEPOT DRILLER AMERICAN AUGER PROJECT ASH LANDFILL DRILLING METHOD \_ HSA LOCATION 5/5/93 DATE WELL NAME MW-46 Elevation of Top of Surface casing: 650.65 Elevation Top of Riser: -Length of Exposed Guardpipe: 2.55 648.10' Elevation of Ground Surface: \_\_\_ - Type of Surface Seal: PORTLAND CEMENT I.D. of Surface Guardpipe: Diameter of Hole: \_\_\_\_ 4.25" Riser Pipe I.D.: \_\_\_\_\_\_2" PVC Type of Riser Pipe: - Type of Grout: \_\_\_\_\_ PORTLAND/BENTONITE - Elevation/Depth Top of Seal: 645.60' - Type of Seal: BENTONITE CHIPS -Type of Sandpack: FINE Elevation/Depth Top of Screen: Type of Screen: I.D. Screen: 2" Type of Sand Pack: COARSE \_ Elevation/Depth Bottom of Screen: 639.60 Elevation/Depth Bottom of Hole: 639.10 ALL ELEVATIONS RELATIVE TO MSL

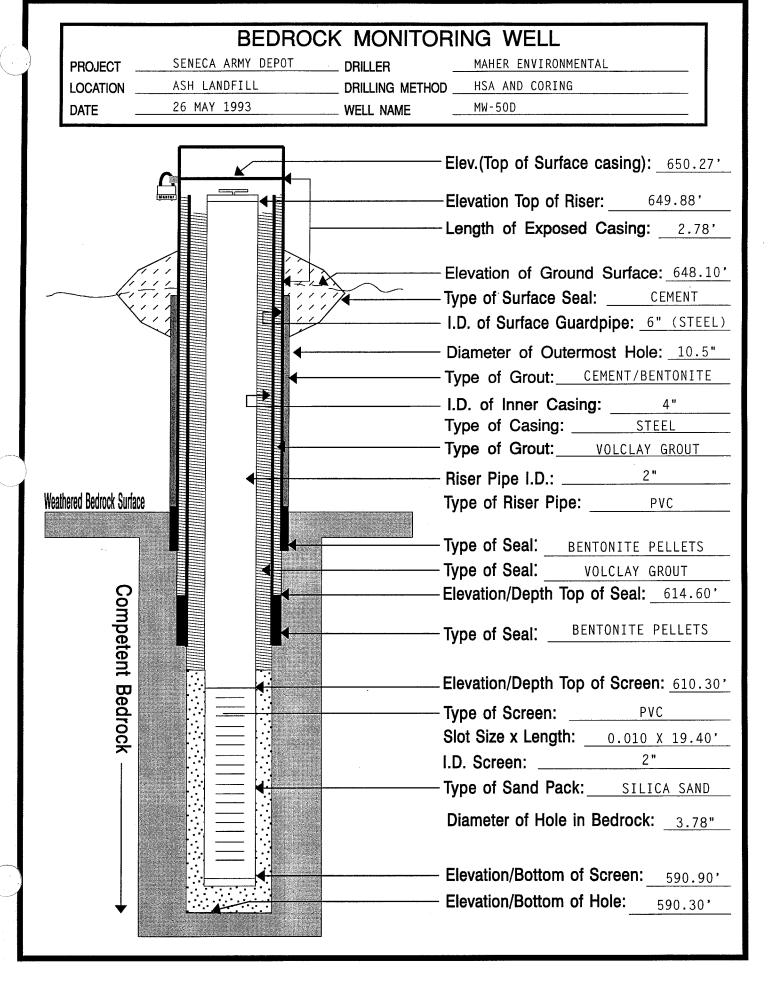
OVERBURDEN MONITORING WELL

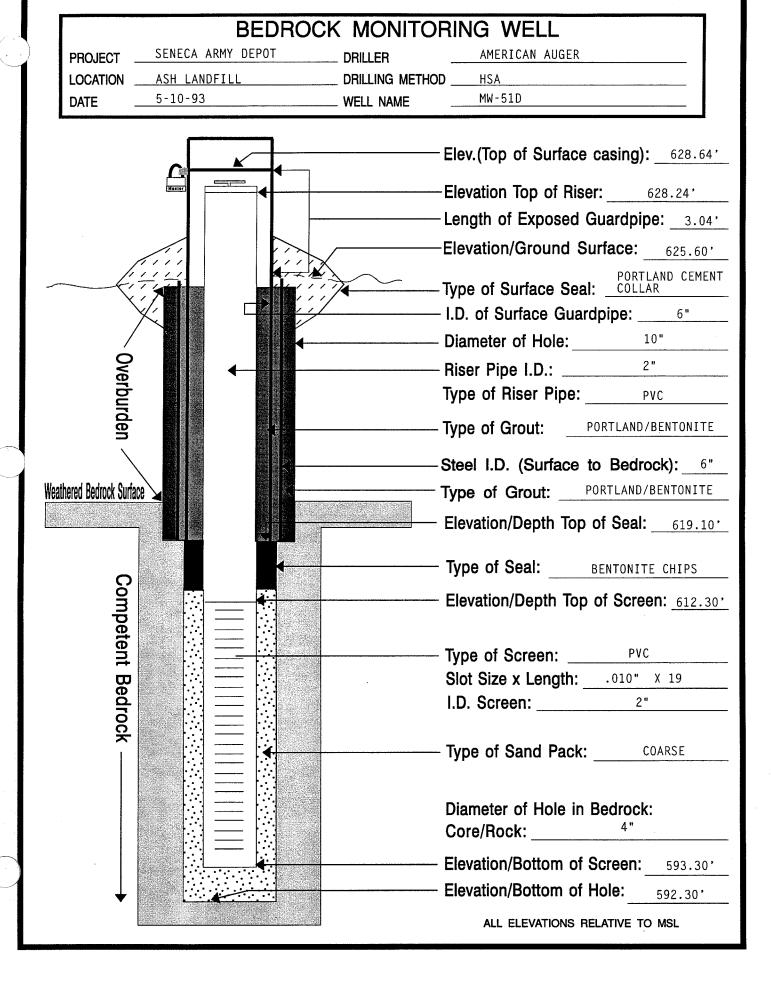
| PROJECT  | SENECA ARMY DEPOT | DRILLERAMERICAN AUGER                                                                                                                                                                                                             |
|----------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LOCATION | ASH LANDFILL      | DRILLING METHOD HSA                                                                                                                                                                                                               |
| DATE     | 5/11/93           | WELL NAME MW-47                                                                                                                                                                                                                   |
|          |                   | Elevation of Top of Surface casing: 628.5  Elevation Top of Riser: 628.06'  Length of Exposed Guardpipe: 3.24'  Elevation of Ground Surface: 625.30'  Type of Surface Seal: PORTLAND CEMENT COLLAR  I.D. of Surface Guardpipe: 4" |
|          |                   | Diameter of Hole: 4.25"                                                                                                                                                                                                           |
|          |                   | Riser Pipe I.D.: 2"                                                                                                                                                                                                               |
|          |                   | Type of Riser Pipe:PVC                                                                                                                                                                                                            |
|          | 4                 | Type of Grout:PORTLAND/BENTONITE                                                                                                                                                                                                  |
|          |                   | Elevation/Depth Top of Seal: 624.657  Type of Seal: BENTONITE CHIPS                                                                                                                                                               |
|          |                   | Type of Sandpack: FINE                                                                                                                                                                                                            |
|          |                   | •                                                                                                                                                                                                                                 |
|          |                   | Elevation/Depth Top of Screen: 621.80                                                                                                                                                                                             |
|          |                   | Type of Screen: PVC                                                                                                                                                                                                               |
|          |                   | Slot Size x Length:010" X 1.5                                                                                                                                                                                                     |
|          |                   | I.D. Screen: 2"                                                                                                                                                                                                                   |
|          |                   | Type of Sand Pack: coarse                                                                                                                                                                                                         |
|          |                   | Florestics / Donath Both                                                                                                                                                                                                          |
|          |                   | Elevation/Depth Bottom of Screen: 620.3                                                                                                                                                                                           |
|          |                   | Elevation/Depth Bottom of Hole: 619.80                                                                                                                                                                                            |
|          |                   | ALL ELEVATIONS RELATIVE TO MSL                                                                                                                                                                                                    |

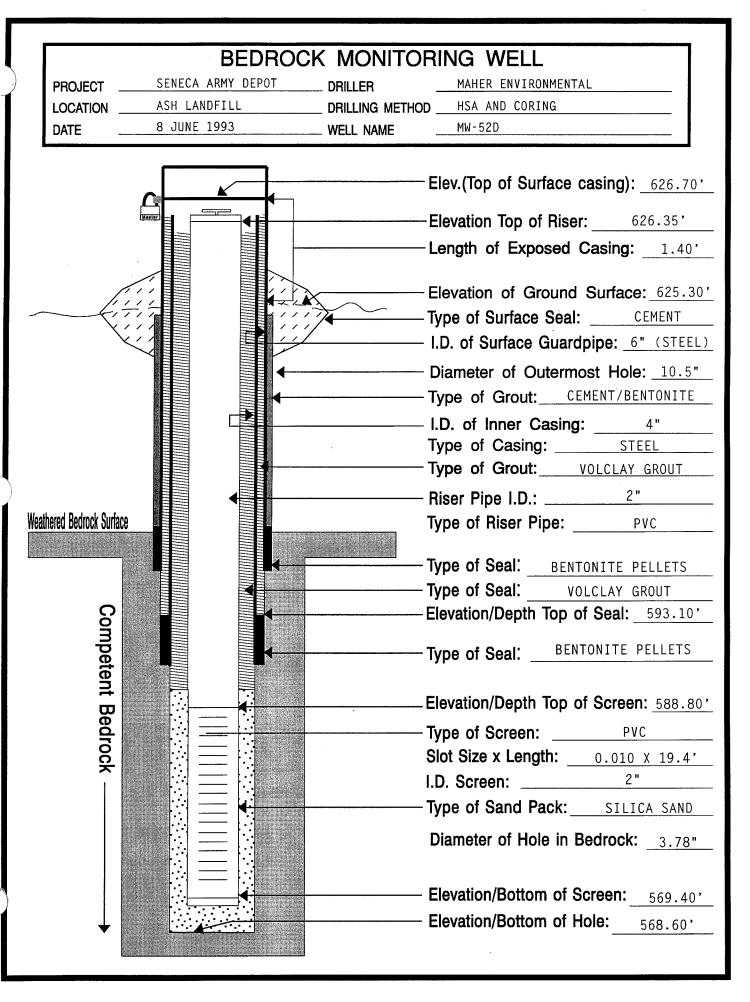
OVERBURDEN MONITORING WELL

| PROJECT SENECA ARMY DEPOT  LOCATION ASH LANDFILL | PEN MONITORING WELL  — DRILLER — AMERICAN AUGER  — DRILLING METHOD — HSA  — WELL NAME — MW-48                                                                                                                                                                                                                                                         |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  | Elevation of Top of Surface casing:648.57'  — Elevation Top of Riser:648.32'  — Length of Exposed Guardpipe:2.57'  — Elevation of Ground Surface:646.00'  — Type of Surface Seal:PORTLAND CEMENT COLLAR  — I.D. of Surface Guardpipe:4"  — Diameter of Hole:4.25"  — Riser Pipe I.D.:2"  — Type of Riser Pipe:PVC  — Type of Grout:PORTLAND/BENTONITE |
|                                                  | Elevation/Depth Top of Seal: 643.50'  Type of Seal: BENTONITE CHIPS                                                                                                                                                                                                                                                                                   |
|                                                  | Type of Sandpack: FINE                                                                                                                                                                                                                                                                                                                                |
|                                                  | Elevation/Depth Top of Screen: 642.50                                                                                                                                                                                                                                                                                                                 |
|                                                  | Type of Screen: PVC  Slot Size x Length: 1.D. Screen: 2"                                                                                                                                                                                                                                                                                              |
|                                                  | Type of Sand Pack: coarse                                                                                                                                                                                                                                                                                                                             |
| <b>A</b>                                         | Elevation/Depth Bottom of Screen: 637.50 Elevation/Depth Bottom of Hole: 637.00                                                                                                                                                                                                                                                                       |
| <u> </u>                                         | ALL ELEVATIONS RELATIVE TO MSL                                                                                                                                                                                                                                                                                                                        |



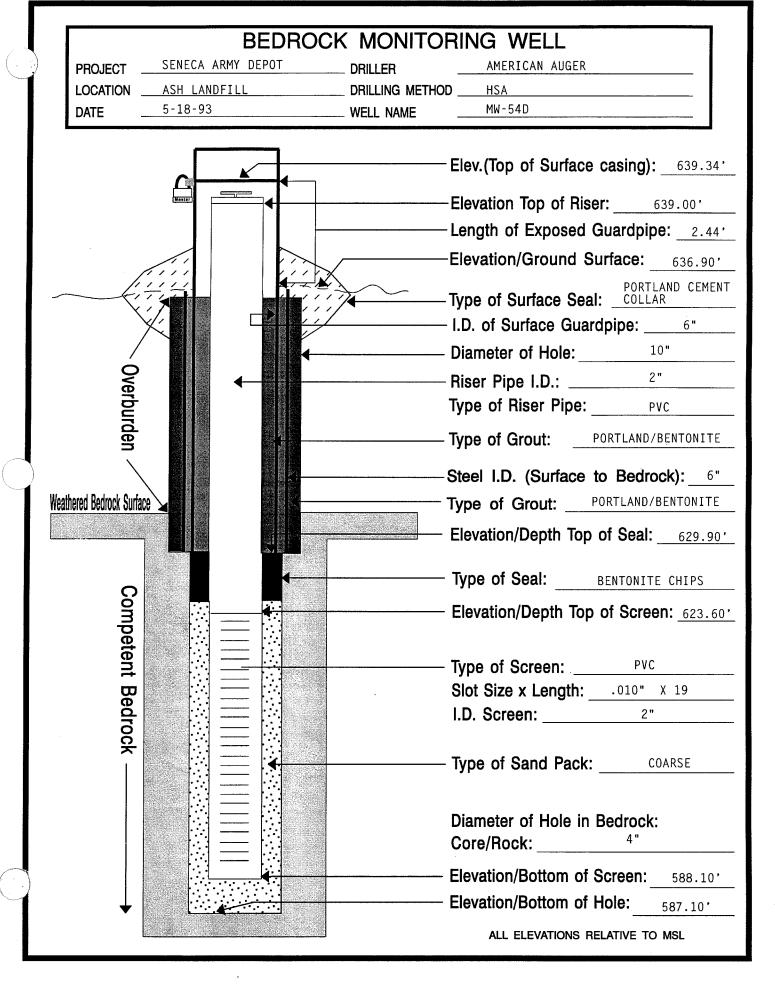


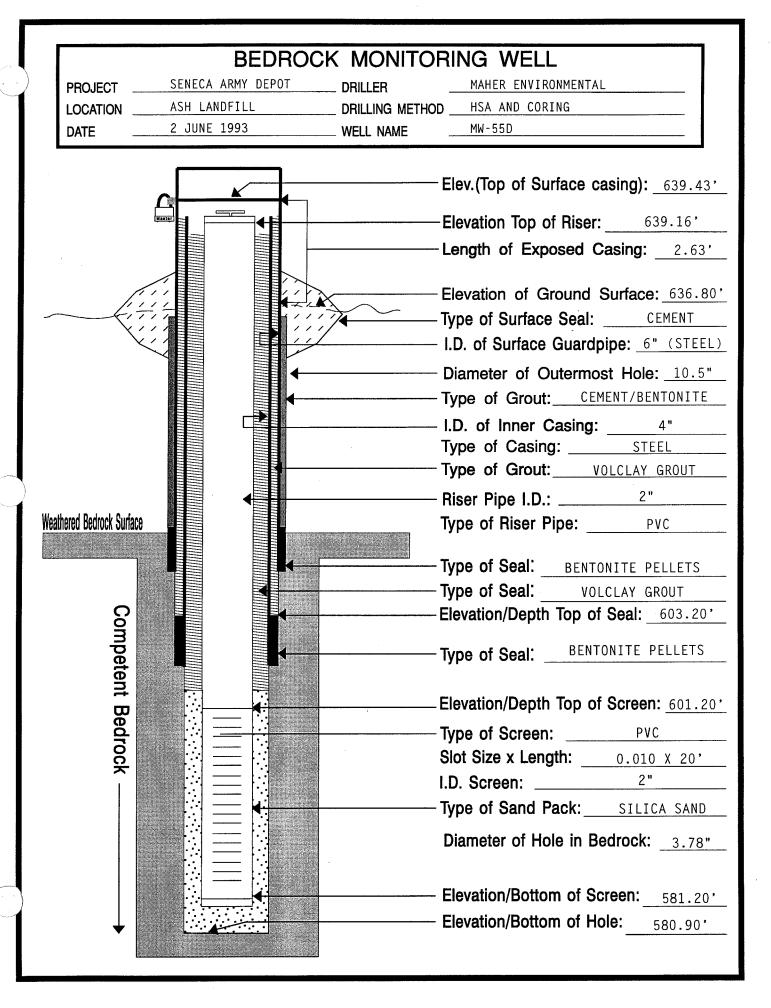




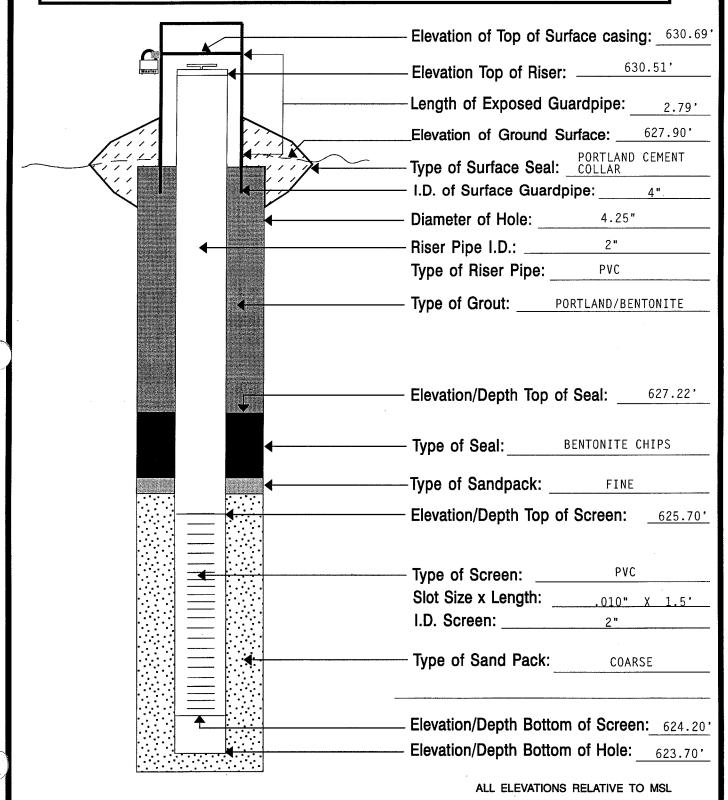
#### AMERICAN AUGER SENECA ARMY DEPOT DRILLER PROJECT ASH LANDFILL DRILLING METHOD HSA LOCATION MW-53 5/6/93 DATE WELL NAME Elevation of Top of Surface casing: 639.63 - Elevation Top of Riser: $\, -$ Length of Exposed Guardpipe: 2.13 Elevation of Ground Surface: 637.00' - Type of Surface Seal: PORTLAND CEMENT I.D. of Surface Guardpipe: Diameter of Hole: 4.25" Riser Pipe I.D.: 2" Type of Riser Pipe: PVC - Type of Grout: PORTLAND/BENTONITE - Elevation/Depth Top of Seal: 635.50 - Type of Seal: BENTONITE CHIPS -Type of Sandpack: \_\_\_\_ FINE Elevation/Depth Top of Screen: 633.00' Type of Screen: I.D. Screen: 2" Type of Sand Pack: COARSE Elevation/Depth Bottom of Screen: 629.007 — Elevation/Depth Bottom of Hole: 629.50\* ALL ELEVATIONS RELATIVE TO MSL

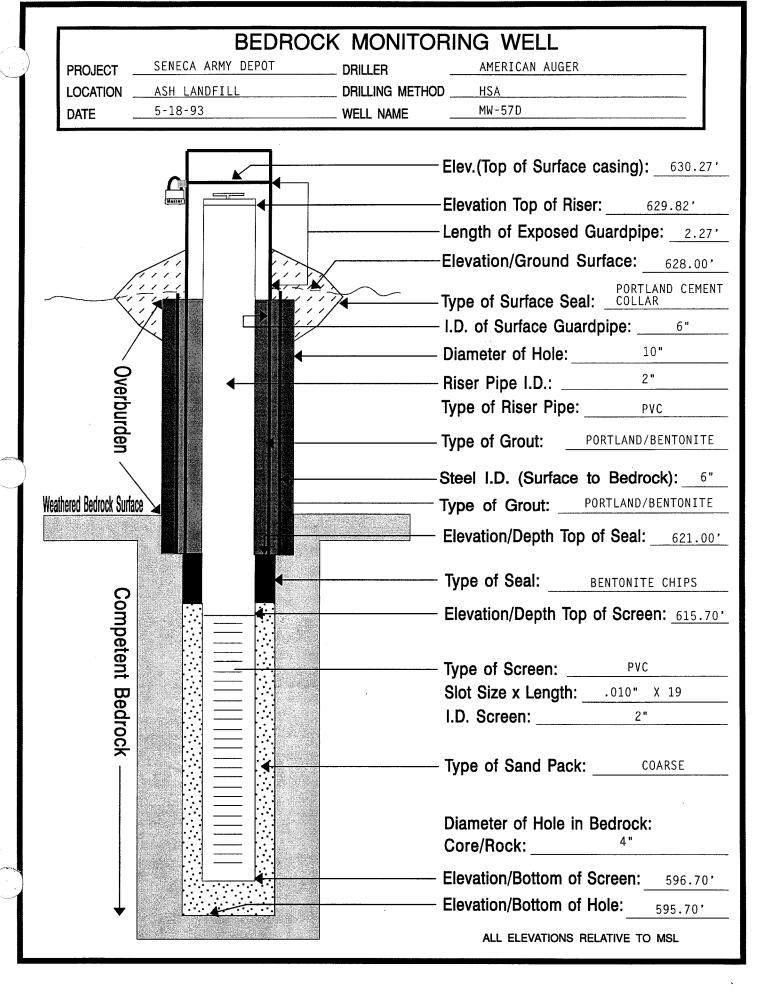
OVERBURDEN MONITORING WELL

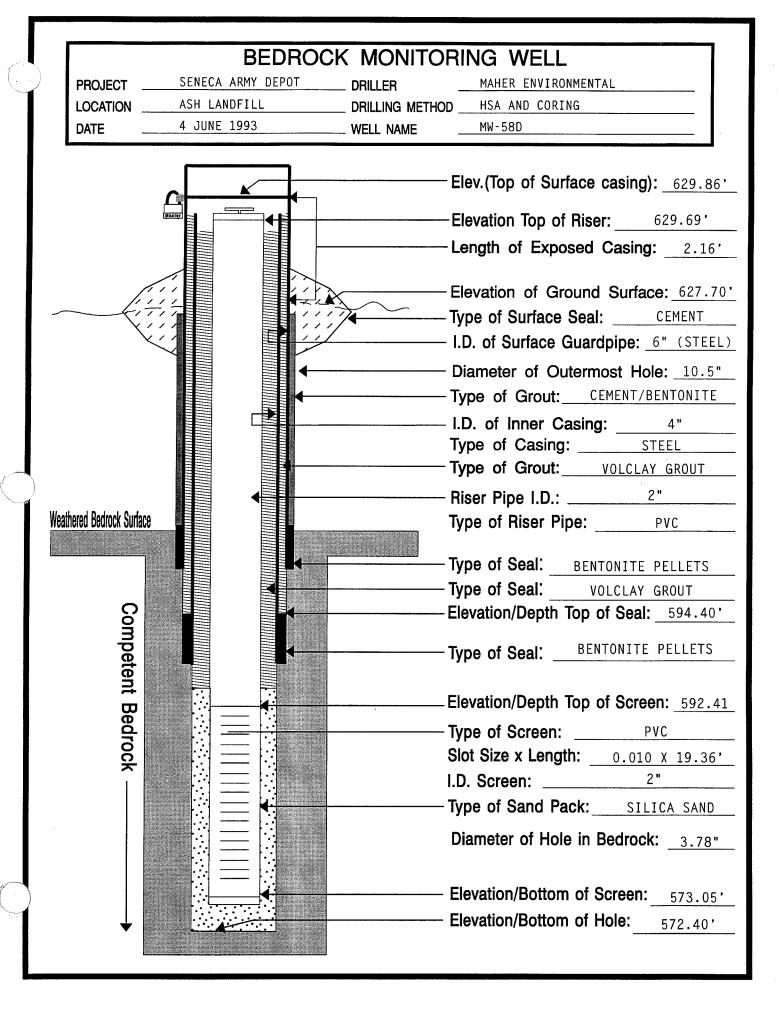




# OVERBURDEN MONITORING WELL PROJECT SENECA ARMY DEPOT DRILLER AMERICAN AUGER LOCATION ASH LANDFILL DRILLING METHOD HSA DATE 5/11/93 WELL NAME MW-56







TOP OF ROCK (TOR) Q11 295 100

11-8-06 11-8-06 1025 mw-26 SS HB = 204, 15,15 TORQ 10' 6 10.5 MW-270 Chip. TO Sand To 3.5 0850 1020

11-8-06 11-8-06 MW-26 mw-23 \$ 10' MW-23 5.6 TOR. Chyps 4,5 to 63 10'2 TT 11.564.5 30 TORQ 11 11.6.66.5 screens 1228 mw-29 1540 5,68-14 mw-29 HB TOR@10 Chipo 3 to 65 sell (Top Sail) 23'X 10' TOR LO

11-8-6 11-8-6 MB=12,13 14,15 mw-29 63 Chips 35 763 10.5 to 5.5 scree TOREGO.Z 3.5 To HA15, 5, 6, 5 mw-29 HBZ50/2

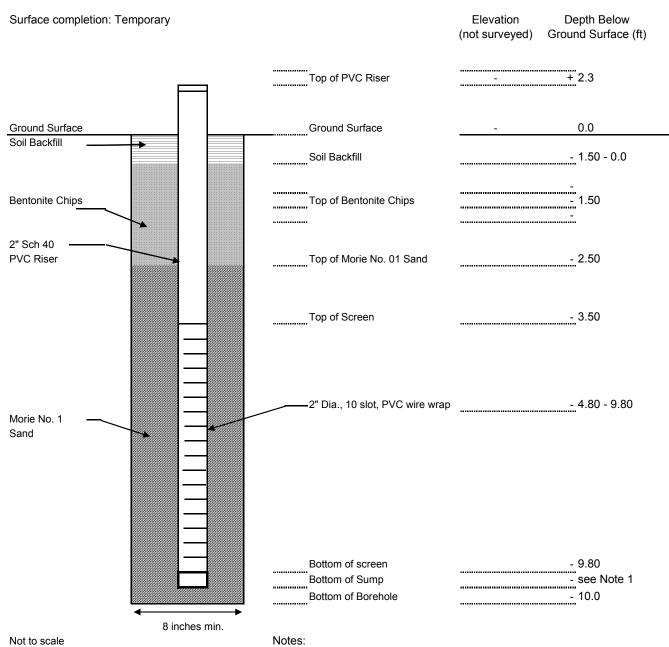
Det 11-9-06 11-9-06 site with MW-2 loven to chips 3 to 63 MW-25 Dard 1063 TOR 6.8 pt-18A Some as above HB= WOH, 2, 3, HB-7, 13, 11, 10 CTOP SOIL, 2-6' HBM, 5,53

11-9-06 11-9-06 HB=6,13,15,17 Chips 2.8 to 65 S TOR 26.9 sanf 9.8 to 2.8 Screen 9.8 To 4.8'. TP 9.8' 15, 38, 59, SS-

11-10-06 mw-24 mw-24 mw-24 05 Sono 11 to 6' 1400 1300 in

#### **Monitoring Well Construction Detail** SEAD-48

Ash Landfill - Biowall Depot Activity Priling Contractor: Project: Geologic Drilling, Inc. Well Number: MWT-17R **Date Started:** 8/22/2005 Geologist: McAllister **Date Completed:** 8/22/2005



(1) 6 inch end cap installed at bottom of well screen.

Measured length of casing and screen prior to installation is 15.5 (before the well casing was cut to 2.30

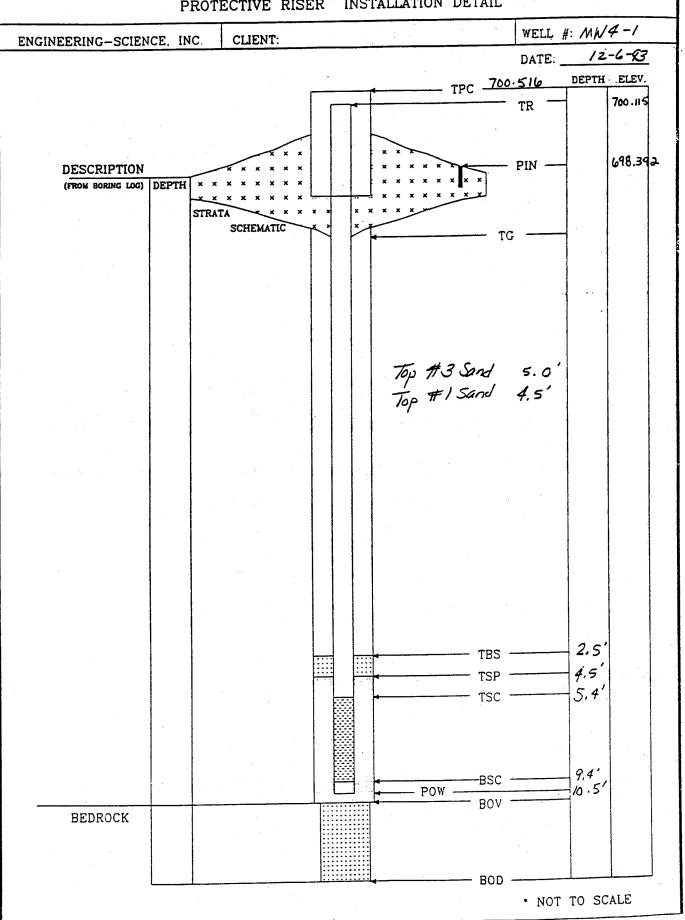
PAGE 1 OF 2 OVERBURDEN MONITORING WELL **COMPLETION REPORT & INSTALLATION DETAIL** PROTECTIVE RISER COMPLETION ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW4-/ PROJECT: 10 SWMU PROJECT NO: 720477 SEAD 4 LOCATION: INSPECTOR: ES/&B CHECKED BY: DRILLING CONTRACTOR: Empire POW DEPTH: 10.5 Scott DRILLER: INSTALLATION STARTED: 12-6-93 DRILLING COMPLETED: 12-6-93 INSTALLATION COMPLETED: 12-6-93 BORING DEPTH: SURFACE COMPLETION DATE: 12-6-93 DRILLING METHOD(S): COMPLETION CONTRACTOR/CREW: Empike BORING DIAMETER(S): 8/21 BEDROCK CONFIRMED (Y/N?) ASSOCIATED SWMU/AOC: ESTIMATED GROUND ELEVATION: 698.392 PROTECTIVE SURFACE CASING: DIAMETER: 4" 4" Steel LENGTH: RISER: TYPE: PVC - D DIAMETER: 2" LENGTH: TR: SCREEN: SLOT TSC: 5,4' TYPE: PVC 40 DIAMETER: 2" LENGTH: 4' SIZE: 0.01" POINT OF WELL: (SILT SUMP) POW: 10,5 GROUT: TG: Ground TYPE: Coment-benton't LENGTH: 2,5 SEAL: TYPE: bentant pollets LENGTH: TSP: 4.5' #1 5.0'#1 TYPE: SAND PACK: #39#/ LENGTH: SURFACE COLLAR: RADIUS: 2 X2 THICKNESS CENTER: TYPE: THICKNESS EDGE: / CENTRALIZER DEPTHS DEPTH 1: \_\_\_\_ DEPTH 2: \_\_\_\_ DEPTH 3: \_\_\_\_ DEPTH 4: COMMENTS:

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

\* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

## OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

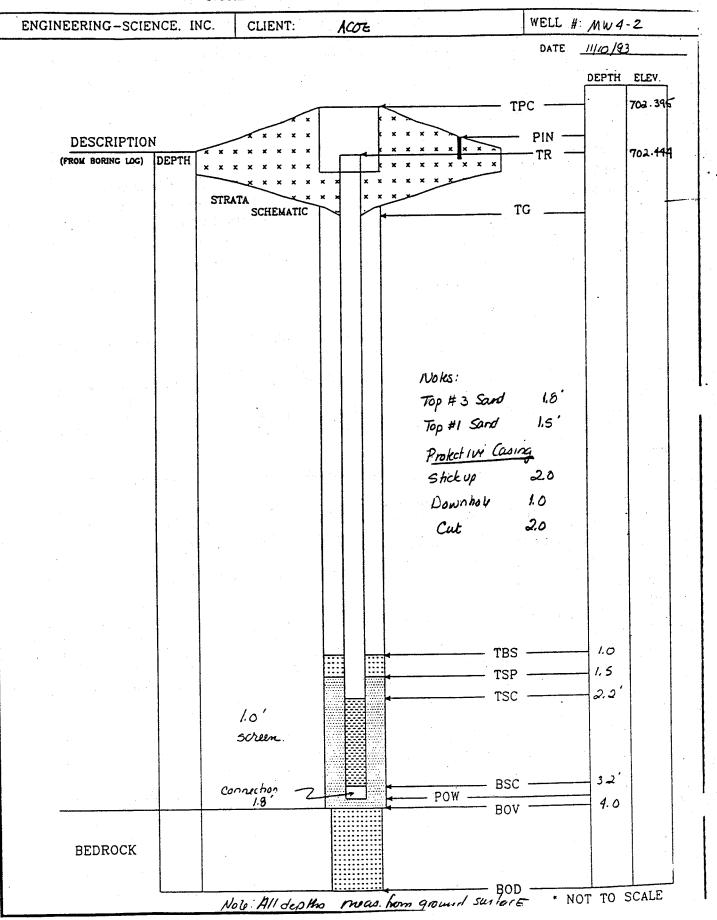


OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL ROADWAY BOX - SURFACE COMPLETION ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW-4-2 PROJECT: \_\_ 10 SWMU LOCATION: 5590 4 INSPECTOR: ES CHECKED BY: DRILLING CONTRACTOR: Empire POW DEPTH: 4,0 DRILLER: Bob INSTALLATION STARTED: 11/10/93 DRILLING COMPLETED: 11/10/93 INSTALLATION COMPLETED: 11/10/93 BORING DEPTH: 4.0 SURFACE COMPLETION DATE: 11/10/93 DRILLING METHOD(S): HSA COMPLETION CONTRACTOR/CREW: EMPIRE BORING DIAMETER(S): 81/21 BEDROCK CONFIRMED (Y/N?) ASSOCIATED SWMU/AOC: ESTIMATED GROUND ELEVATION: 699.448 PROTECTIVE SURFACE CASING: DIAMETER: 4"x4" Ske/ LENGTH: RISER: TR: TYPE: PVC 40 DIAMETER: SCREEN: DIAMETER: 11 1 2 SIZE: 0.01" POINT OF WELL: (SILT SUMP) TYPE: Pyc point GROUT: TG: ground TYPE: Com.-bentonia LENGTH: SEAL: TBS: 1.0' TYPE: bentonit pellet LENGTH: SAND PACK: 1.5'- #1 16'-#3 TYPE: #3 + #1 TSP: LENGTH: SURFACE COLLAR: TYPE: Cement RADIUS: THICKNESS CENTER: THICKNESS EDGE: CENTRALIZER DEPTHS DEPTH 1: DEPTH 2: DEPTH 3: COMMENTS: \*ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

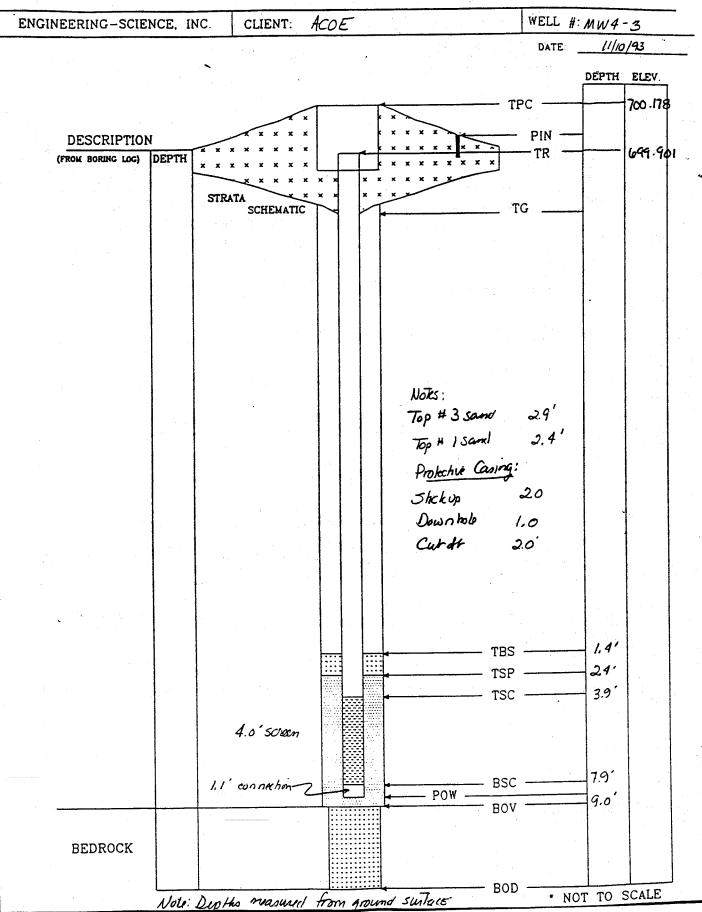
# OVERBURDEN MONITORING WELL ROADWAY BOX INSTALLATION DETAIL



OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL ROADWAY BOX - SURFACE COMPLETION ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW4-3 PROJECT: 10 SWMU PROJECT NO: 720477 LOCATION: SEAD 4 INSPECTOR: CHECKED BY: DRILLING CONTRACTOR: Empire POW DEPTH: 90' DRILLER: Bob INSTALLATION STARTED: 11/10/93 DRILLING COMPLETED: 11/10/93 INSTALLATION COMPLETED: 11/10/93 BORING DEPTH: 9.0 SURFACE COMPLETION DATE: 11/10/93 DRILLING METHOD(S): HSA COMPLETION CONTRACTORICREW: Empire BORING DIAMETER(S): 81/2" BEDROCK CONFIRMED (Y/N?) ASSOCIATED SWMU/AOC: ESTIMATED GROUND ELEVATION: 697.669 PROTECTIVE SURFACE CASING: DIAMETER: 4"x 4" Shel LENGTH: RISER: TR: DIAMETER: 2" SCREEN: SLOT TSC: 3,9' SIZE: .0/" POINT OF WELL: (SILT SUMP) TYPE: PYC point GROUT: Ground LENGTH: SEAL: TYPE: <u>bentont</u> pelots LENGTH: SAND PACK: TYPE: #3 - #/ LENGTH: SURFACE COLLAR: TYPE: Cement RADIUS: THICKNESS CENTER: / THICKNESS EDGE: CENTRALIZER DEPTHS DEPTH 1: DEPTH 2: DEPTH 3: COMMENTS: \* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE SEE PAGE 2 FOR SCHEMATIC PAGE 1 OF 2

ver. 1/07-0a-92

#### OVERBURDEN MONITORING WELL ROADWAY BOX INSTALLATION DETAIL

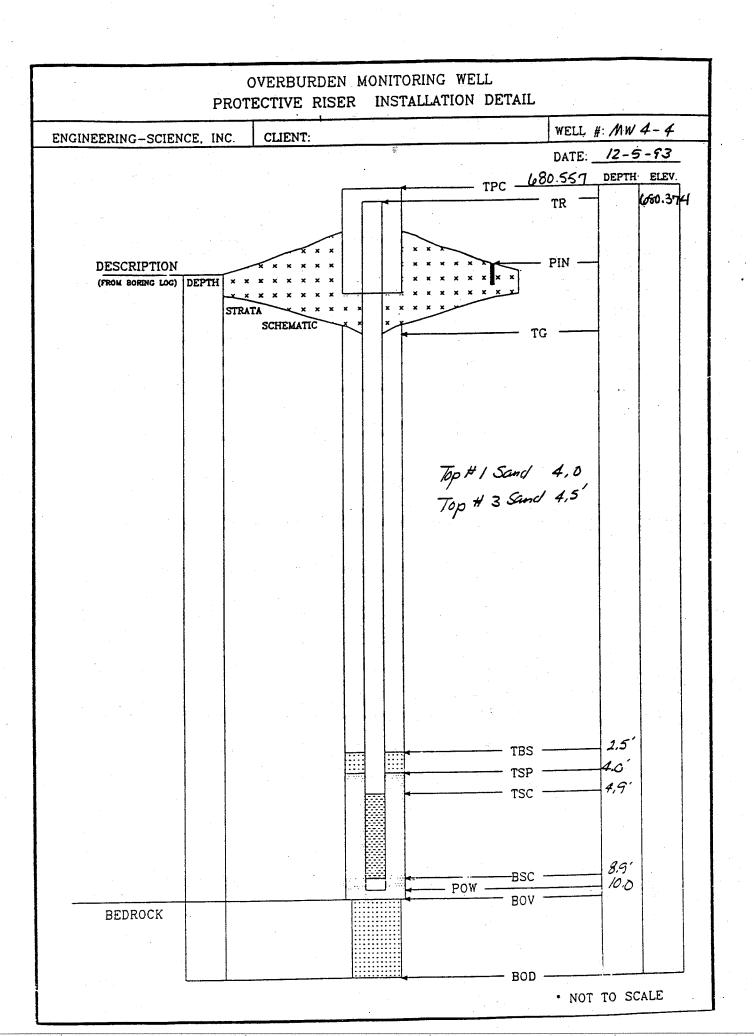


OVERBURDEN MONITORING WEI **COMPLETION REPORT & INSTALLATION DETAIL** PROTECTIVE RISER COMPLETION ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW 4-4 PROJECT: 10 SWMU PROJECT NO: 720477 LOCATION: SEAD 4 INSPECTOR: CHECKED BY: DRILLING CONTRACTOR: Empic POW DEPTH: 10.0 DRILLER: INSTALLATION STARTED: 12-5-93 DRILLING COMPLETED: INSTALLATION COMPLETED: /2-5-93 BORING DEPTH: SURFACE COMPLETION DATE: 12-5-93 DRILLING METHOD(S): ASA COMPLETION CONTRACTOR/CREW: Empire BORING DIAMETER(S): 812" BEDROCK CONFIRMED (Y/N?) ASSOCIATED SWMU/AOC: ESTIMATED GROUND ELEVATION: 678.217 PROTECTIVE SURFACE CASING: DIAMETER: 4" x 4" Steel LENGTH: RISER: DIAMETER: SCREEN: SLOT DIAMETER: LENGTH: 4.0 POINT OF WELL: (SILT SUMP) TYPE: PVC DOINT GROUT: TYPE: Cement - ban tom tilength: TG: Ground SEAL: 4.0 - #1 4.5- #3 TYPE: #3 and #1 SAND PACK: SURFACE COLLAR: TYPE: Cement 2'x 2' RADIUS: THICKNESS CENTER: THICKNESS EDGE: CENTRALIZER DEPTHS DEPTH 1: DEPTH 2: DEPTH 3: DEPTH 4: COMMENTS:

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

\* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE



PAGE 1 OF 2 OVERBURDEN MONITORING WELL **COMPLETION REPORT & INSTALLATION DETAIL** PROTECTIVE RISER COMPLETION ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW4-5 PROJECT: 10 SWMU PROJECT NO: 720477 LOCATION: SEAD 4 INSPECTOR: ES/LB CHECKED BY: DRILLING CONTRACTOR: Empiré POW DEPTH: DRILLER: John W. INSTALLATION STARTED: /2/5/93 DRILLING COMPLETED: 12-5-93 INSTALLATION COMPLETED: 12/5/93 BORING DEPTH: SURFACE COMPLETION DATE: 12/5/93 DRILLING METHOD(S): HSA COMPLETION CONTRACTOR/CREW: Empire BORING DIAMETER(S): 8 1/2" BEDROCK CONFIRMED (Y/N?) ASSOCIATED SWMU/AOC: ESTIMATED GROUND ELEVATION: 1099.182 PROTECTIVE SURFACE CASING: 4"x 4" Steel DIAMETER: LENGTH: TR: DIAMETER: 2' SLOT TYPE: PVC-40 DIAMETER: LENGTH: SIZE: 001 POINT OF WELL: (SILT SUMP) TYPE: Comest - bento note LENGTH: TYPE: bento note pellots LENGTH: SAND PACK:

|                              |               | 77 0 41.70        |   |                 |    |
|------------------------------|---------------|-------------------|---|-----------------|----|
| SURFACE COLLAR: TYPE: Cenunt | RADIUS: 2'x2' | THICKNESS CENTER: | / | THICKNESS EDGE: | ′′ |
| CENTRALIZER DEPTHS DEPTH 1:  | DEPTH 2:      | DEPTH 3:          |   | DEPTH 4:        |    |
| COMMENTS:                    |               |                   |   |                 |    |

RISER:

SCREEN:

GROUT:

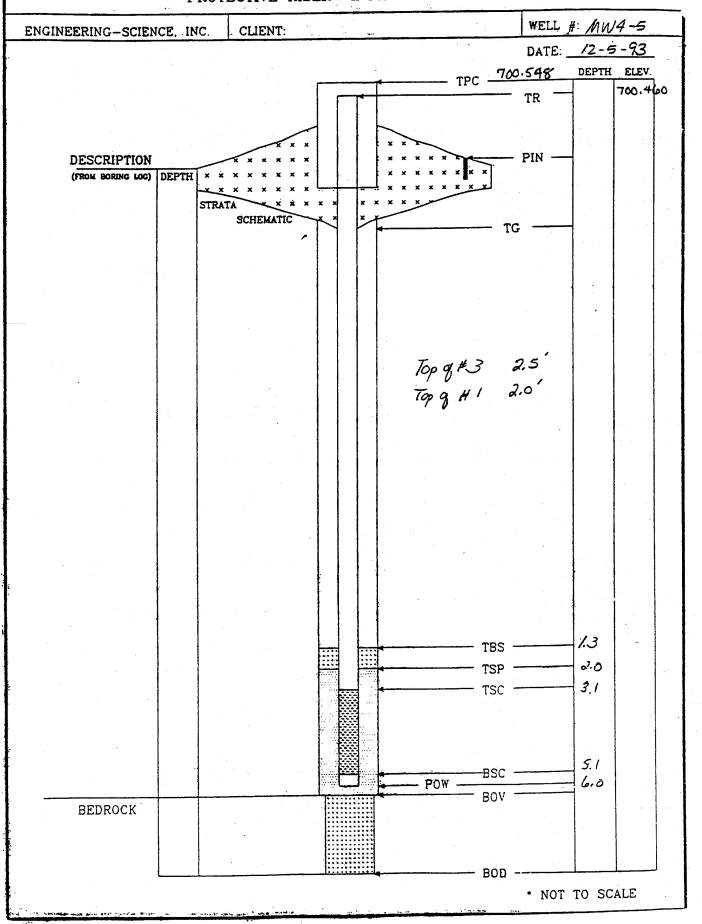
SEAL:

\* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

#### OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL



| Parsons | ES | Inc. |
|---------|----|------|
|---------|----|------|

WELL NUMBER: MW4-6

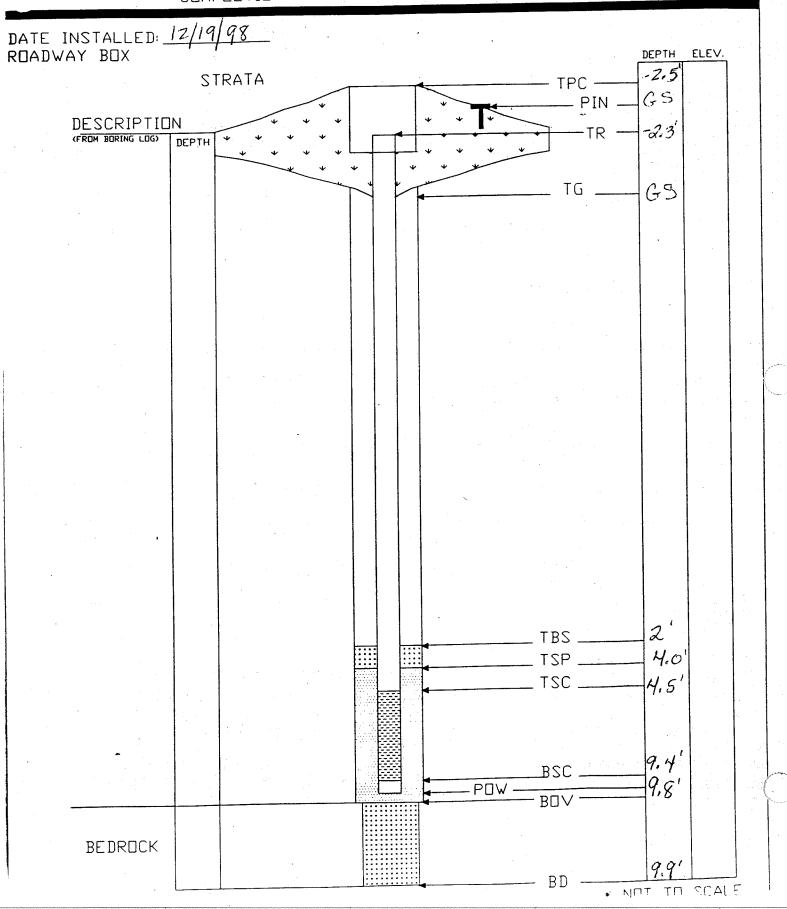
#### OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

| CLIENT/PROJECT:<br>LOCATION:                                                                                                            | Senera Army Depot<br>Sead 4 |                      | PROJECT NO: <u>734539</u><br>INSPECTOR: <u> </u>                                                                  | 01001                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| DRILLING CONTRACTOR: DRILLER: DRILLING COMPLETED: BORING DEPTH: DRILLING METHOD(S): BORING DIAMETER(S):                                 | 5. Breeds<br>12/19/98       | SUI                  | POW DEPTH INSTALLATION STARTED ISTALLATION COMPLETED RFACE COMPLETION DATE TION CONTRACTOR/CREW BEDROCK CONFIRMED | : 12/19/98<br>: 12/19/98<br>: 14/99<br>: Maxim/Bacds |
| ASSOCIATED SWMU/AOC:<br>COORDINATE SYSTEM:<br>DATUM<br>ELEVATIONS: PIN:                                                                 | : NGVD 1929                 | NORTHING:            | EASTING TPC:                                                                                                      |                                                      |
| PROTECTIVE CASING:<br>TYPE:                                                                                                             | Steel DIAMET                | er: <u>4"</u>        | LENGTH: 5'                                                                                                        | _                                                    |
| RISER: TR: -2.3'                                                                                                                        | TYPE: PVC                   | diameter: <u>a</u> " | LENGTH: 6.8                                                                                                       | _                                                    |
| SCREEN:<br>TSC: 4.5'                                                                                                                    | туре: РИС                   | diameter: <u>2</u> " | LENGTH: 4,9'                                                                                                      | SLOT<br>SIZE: //O                                    |
| POINT OF WELL:(SILT SUM                                                                                                                 | P) TYPE: <u>PVC</u>         | BSC: <u>9.4</u>      | /_ POW: 9.8                                                                                                       | -                                                    |
| SURFACE SEAL:                                                                                                                           | TYPE: Grout                 | DIAMETER: 2'         | THICKNESS:                                                                                                        |                                                      |
| GROUT: TG:                                                                                                                              | GS TYPE:                    | Sand 4 Griff Gravel  | LENGTH: 2'                                                                                                        | -                                                    |
| SEAL: TBS: _                                                                                                                            | 2' TYPE:                    | Bentonite            | LENGTH: 2'                                                                                                        |                                                      |
| SAND PACK: TSP:                                                                                                                         | 4.0', 4.5' TYPE:            | #00,#0               | LENGTH: 5.9'                                                                                                      | ·                                                    |
| COMMENTS:                                                                                                                               |                             |                      |                                                                                                                   |                                                      |
| LEGEND (DEPTH TO):  TPC-TOP OF PROTECTIVE TR-TOP OF RISER PIN-SURVEYED GROUND TG-TOP OE GROUT BD-BOTTOM OF DRILL HO OV-BASE OF OVERBURI | ) SURFACE<br>OLE            | * ALL MEASUREMEN     | TBS-TOPOF BENT TSP-TOP OF SANI TSC-TOP OF SCRE BSC-BOTTOM OF POW-POINT OF W TS REFERENCED TO GROU                 | DPACK<br>EEN<br>SCREEN<br>'ELL                       |

Parsons ES Inc.

WELL: MW 4-6

## OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL



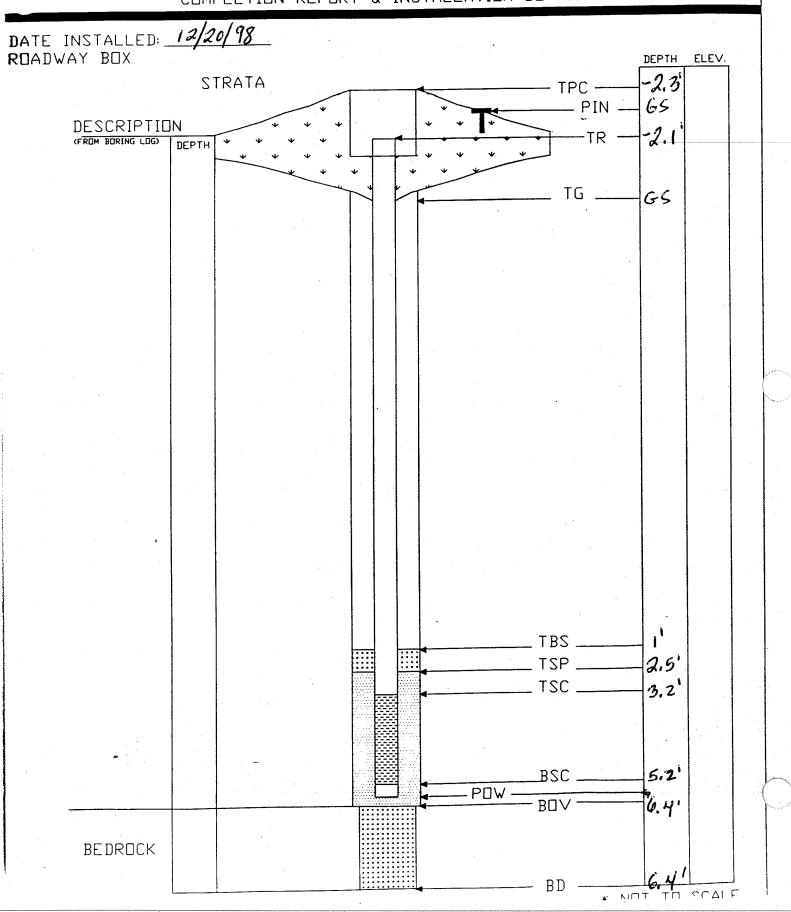
Parsons ES Inc.

WELL NUMBER: MW-1-7

#### OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

| CLIENT/PROJECT: Sencia from Deport LOCATION: Sead 4                                                                                                                    | PROJECT NO: 734539 - 01001<br>INSPECTOR: LLB                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                        | CHECKED BY:                                                                                                                                                                          |
| DRILLING CONTRACTOR: //axim  DRILLER: 5. Breeds  DRILLING COMPLETED: 12/20/93  BORING DEPTH: 6  DRILLING METHOD(S): 44" 45A  BORING DIAMETER(S): 3"                    | POW DEPTH: 6,4'  INSTALLATION STARTED: 13/30/93'  INSTALLATION COMPLETED: 12/31/98'  SURFACE COMPLETION DATE: 17/199  COMPLETION CONTRACTOR/CREW: Maxim/Breeds  BEDROCK CONFIRMED: Y |
| ASSOCIATED SWMU/AOC: Sead COORDINATE SYSTEM:  DATUM: NGVD 1929  ELEVATIONS: PIN: TOC:                                                                                  | NORTHING: EASTING:                                                                                                                                                                   |
| PROTECTIVE CASING:  TYPE: Stee   DIAMETER                                                                                                                              | : <u>4"</u> Length: <u>5'</u>                                                                                                                                                        |
| RISER:<br>TR: - 2.1 TYPE: PVC 1                                                                                                                                        | DIAMETER: 2" LENGTH: 5.3'                                                                                                                                                            |
| SCREEN:  TSC: $3,2$ TYPE: $P/C$                                                                                                                                        | DIAMETER: $a''$ LENGTH: $a'$ SLOT SIZE: $10$                                                                                                                                         |
| POINT OF WELL:(SILT SUMP)  TYPE: アノと                                                                                                                                   | BSC: <u>5,2'</u> POW: <u>6</u>                                                                                                                                                       |
| SURFACE SEAL: TYPE: Grout I                                                                                                                                            | DIAMETER: 2' THICKNESS: /'                                                                                                                                                           |
| GROUT: TG: GS TYPE: S                                                                                                                                                  | and + Grave   LENGTH: 11 18                                                                                                                                                          |
| SEAL: TBS: // TYPE: <u>&amp;</u>                                                                                                                                       | entonite LENGTH: 1,5'                                                                                                                                                                |
| SAND PACK: TSP: <u>0,5', 3,0'</u> TYPE: <u>#</u>                                                                                                                       | 00, #0 LENGTH: 3,5'                                                                                                                                                                  |
| COMMENTS:                                                                                                                                                              |                                                                                                                                                                                      |
| LEGEND (DEPTH TO):  TPC-TOP OF PROTECTIVE CASING:  TR-TOP OF RISER  PIN-SURVEYED GROUND SURFACE  TG-TOP OE GROUT  BD-BOTTOM OF DRILL HOLE  BOV-BASE OF OVERBURDEN  * A | TBS-TOPOF BENTONITE SEAL TSP-TOP OF SANDPACK TSC-TOP OF SCREEN BSC-BOTTOM OF SCREEN POW-POINT OF WELL LL MEASUREMENTS REFERENCED TO GROUND SURFACE                                   |

WELL: MW M-7

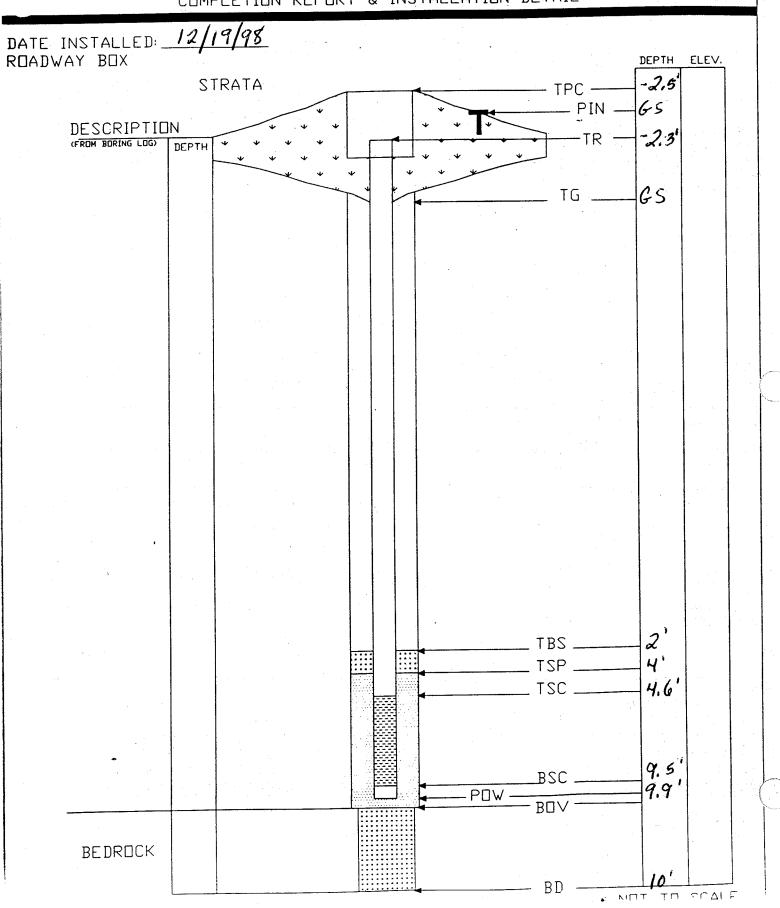


| <b>Parsons</b> | ES           | Inc  |
|----------------|--------------|------|
| I alsonia      | $\mathbf{L}$ | TATA |

WELL NUMBER: 1864-8

| CLIENT/PROJECT: Senera Aimy Depot<br>LOCATION: Sead 4                                                                                                             | PROJECT NO: 734539 - 01001<br>INSPECTOR: 21.6<br>CHECKED BY:                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DRILLING CONTRACTOR: Maxim  DRILLER: S. Rieeds  DRILLING COMPLETED: 12/19/98  BORING DEPTH: 10'  DRILLING METHOD(S): 4'4' 454  BORING DIAMETER(S): 8"             | POW DEPTH: 9,9'  INSTALLATION STARTED: 12/19/98'  INSTALLATION COMPLETED: 12/19/98'  SURFACE COMPLETION DATE: 14/99'  COMPLETION CONTRACTOR/CREW: Maxim/Rived's  BEDROCK CONFIRMED: Y |
| ASSOCIATED SWMU/AOC: Send  COORDINATE SYSTEM:  DATUM: NGVD 1929  ELEVATIONS: PIN: TOC:                                                                            | NORTHING: EASTING:                                                                                                                                                                    |
| PROTECTIVE CASING:  TYPE: <u>Stee  </u> DIAMETE                                                                                                                   | R: 4" LENGTH: 5'                                                                                                                                                                      |
| RISER: TR: -2.3 TYPE: PVC                                                                                                                                         | diameter: 2" length: 6.9'                                                                                                                                                             |
| SCREEN:<br>TSC: 4,6' TYPE: PVC                                                                                                                                    | DIAMETER: 2" LENGTH: 4,9' SLOT SIZE: 10                                                                                                                                               |
| POINT OF WELL:(SILT SUMP)  TYPE: PVC                                                                                                                              | BSC: <u>9,5</u> POW: <u>10</u>                                                                                                                                                        |
| SURFACE SEAL: TYPE: Grout                                                                                                                                         | DIAMETER: $2'$ THICKNESS: $1'$                                                                                                                                                        |
| GROUT: TG: <u>G</u> 5 TYPE: S                                                                                                                                     | Sand + Grave   LENGTH: 3'                                                                                                                                                             |
| SEAL: TBS: 2' TYPE: ]                                                                                                                                             | Sentonite LENGTH: 2'                                                                                                                                                                  |
| SAND PACK: TSP: 4.0', 4.6' TYPE: 3                                                                                                                                | #00, #0 LENGTH: 6.0'                                                                                                                                                                  |
| COMMENTS:                                                                                                                                                         |                                                                                                                                                                                       |
| LEGEND (DEPTH TO):  TPC-TOP OF PROTECTIVE CASING:  TR-TOP OF RISER  PIN-SURVEYED GROUND SURFACE  TG-TOP OE GROUT  BD-BOTTOM OF DRILL HOLE  BOV-BASE OF OVERBURDEN | TBS-TOPOF BENTONITE SEAL TSP-TOP OF SANDPACK TSC-TOP OF SCREEN BSC-BOTTOM OF SCREEN POW-POINT OF WELL ALL MEASUREMENTS REFERENCED TO GROUND SURFACE                                   |

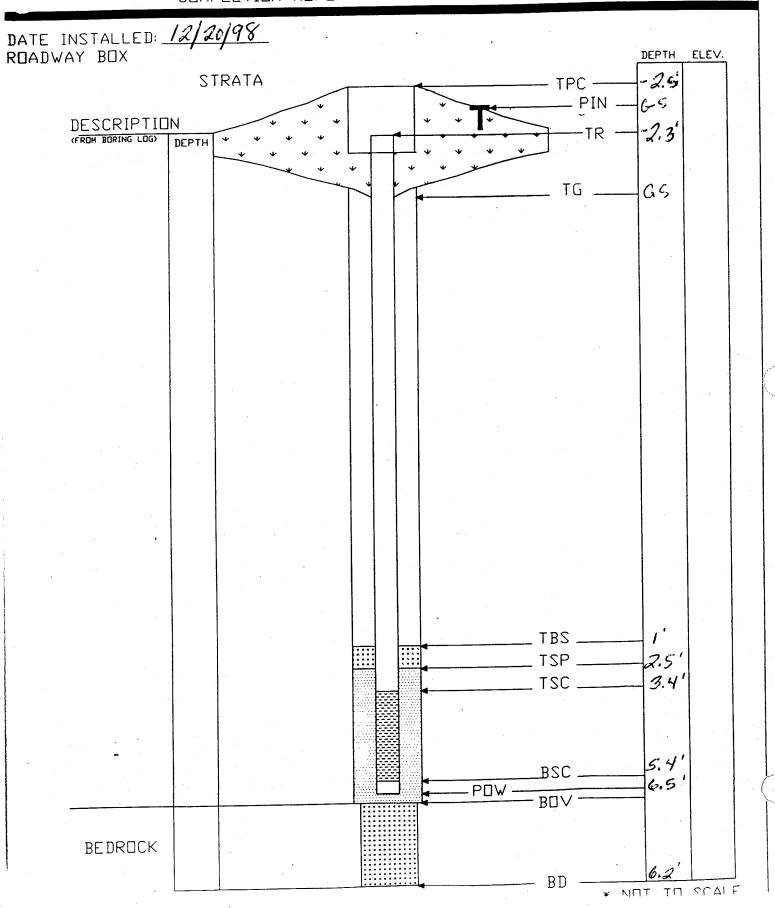
WELL: MW 4-8



WELL NUMBER: MW4-9

| CLIENT/PROJECT: Series fing Bept LOCATION: Sead 4                                                                                                                     | PROJECT NO: 734539-01000<br>INSPECTOR: LLB<br>CHECKED BY:                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DRILLING CONTRACTOR: Maxim  DRILLER: S. Bileds  DRILLING COMPLETED: 12/20/98  BORING DEPTH: 6.2  DRILLING METHOD(S): 4 4" HSA  BORING DIAMETER(S): 8"                 | POW DEPTH: 6,5'  INSTALLATION STARTED: 12/20/93'  INSTALLATION COMPLETED: 12/20/93'  SURFACE COMPLETION DATE: 14/98  COMPLETION CONTRACTOR/CREW: Maxim/Bicelds  BEDROCK CONFIRMED: Y |
| ASSOCIATED SWMU/AOC: SEAD  COORDINATE SYSTEM: DATUM: NGVD 1929 ELEVATIONS: PIN: TOC:                                                                                  | NORTHING: EASTING: TPC:                                                                                                                                                              |
| PROTECTIVE CASING:  TYPE: Stee   DIAMETER                                                                                                                             | :_4"                                                                                                                                                                                 |
| RISER: TR: -2.3 TYPE: PVC                                                                                                                                             | DIAMETER: $2''$ LENGTH: $5.7'$                                                                                                                                                       |
| SCREEN: TSC: 3.4' TYPE: 7/C                                                                                                                                           | DIAMETER: $2''$ LENGTH: $2'$ SIZE: $10$                                                                                                                                              |
| POINT OF WELL:(SILT SUMP)  TYPE: PVC                                                                                                                                  | BSC: <u>5,4'</u> POW: <u>6,2'</u>                                                                                                                                                    |
|                                                                                                                                                                       | DIAMETER: 2' THICKNESS: /'                                                                                                                                                           |
| GROUT: TG: <u>G</u> S TYPE: Sa                                                                                                                                        | and + Gravel LENGTH: 1'                                                                                                                                                              |
| SEAL: TBS: / TYPE: 8                                                                                                                                                  | entonite LENGTH: 1,5'                                                                                                                                                                |
| SAND PACK: TSP: 2,5', 3,0' TYPE: #                                                                                                                                    | EDO, # O LENGTH: 3,8'                                                                                                                                                                |
| COMMENTS:                                                                                                                                                             |                                                                                                                                                                                      |
| LEGEND (DEPTH TO):  TPC-TOP OF PROTECTIVE CASING:  TR-TOP OF RISER  PIN-SURVEYED GROUND SURFACE  TG-TOP OE GROUT  BD-BOTTOM OF DRILL HOLE  OV-BASE OF OVERBURDEN  * A | TBS—TOPOF BENTONITE SEAL TSP—TOP OF SANDPACK TSC—TOP OF SCREEN BSC—BOTTOM OF SCREEN POW—POINT OF WELL ALL MEASUREMENTS REFERENCED TO GROUND SURFACE                                  |

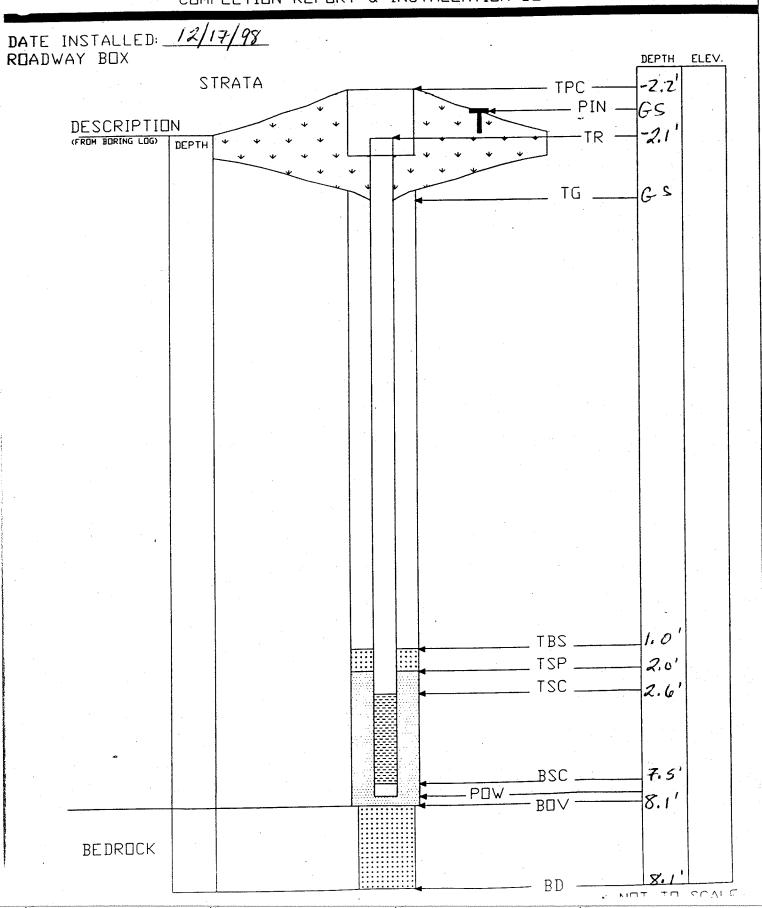
WELL: MW 4-9



WELL NUMBER: MW4-10

| CLIENT/PROJECT: Severa Army Depot Seady                                                                                                                           | PROJECT NO: 734539-01001<br>INSPECTOR: LL/3<br>CHECKED BY:                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DRILLING CONTRACTOR: Maxim  DRILLER: S. Bireds  DRILLING COMPLETED: 12/14/98  BORING DEPTH: 8.0'  DRILLING METHOD(S): 42," HSA  BORING DIAMETER(S): 8"            | POW DEPTH: 8./"  INSTALLATION STARTED: 12/17/98  INSTALLATION COMPLETED: 12/17/98  SURFACE COMPLETION DATE: 17/98  COMPLETION CONTRACTOR/CREW: Maxim/Bixeds  BEDROCK CONFIRMED: Y |
| ASSOCIATED SWMU/AOC: SEAD  COORDINATE SYSTEM:  DATUM: NGVD 1929  ELEVATIONS: PIN: TOC:                                                                            | NORTHING: EASTING:                                                                                                                                                                |
| PROTECTIVE CASING:  TYPE: Stee   DIAMETE                                                                                                                          | R: <u>4"</u> LENGTH: <u>5'</u>                                                                                                                                                    |
| RISER: TR: - 2.1 TYPE: PVC.                                                                                                                                       | DIAMETER: 2" LENGTH: 4.7                                                                                                                                                          |
| screen:  TSC: $2.6'$ Type: $P_{V'C}$                                                                                                                              | DIAMETER: 2" LENGTH: 4,9' SLOT SIZE: 10                                                                                                                                           |
| POINT OF WELL:(SILT SUMP)  TYPE: アック                                                                                                                              | BSC: <u>7. 5′</u> POW: <u>8. 0′</u>                                                                                                                                               |
|                                                                                                                                                                   | DIAMETER: 2' THICKNESS: /'                                                                                                                                                        |
| GROUT: TG: <u>← S</u> TYPE: <u>S</u>                                                                                                                              | and & Grave   LENGTH: 1.0'                                                                                                                                                        |
| SEAL: TBS: /, 0' TYPE: _                                                                                                                                          | Bentonite LENGTH: 1,0'                                                                                                                                                            |
| SAND PACK: TSP: 2,0', 2,5' TYPE:**                                                                                                                                | 60,#0 LENGTH: 6.0'                                                                                                                                                                |
| COMMENTS:                                                                                                                                                         |                                                                                                                                                                                   |
| LEGEND (DEPTH TO):  TPC-TOP OF PROTECTIVE CASING:  TR-TOP OF RISER  PIN-SURVEYED GROUND SURFACE  TG-TOP OE GROUT  BD-BOTTOM OF DRILL HOLE  BOV-BASE OF OVERBURDEN | TBS-TOPOF BENTONITE SEAL TSP-TOP OF SANDPACK TSC-TOP OF SCREEN BSC-BOTTOM OF SCREEN POW-POINT OF WELL ALL MEASUREMENTS REFERENCED TO GROUND SURFACE                               |

WELL: mw 4-10

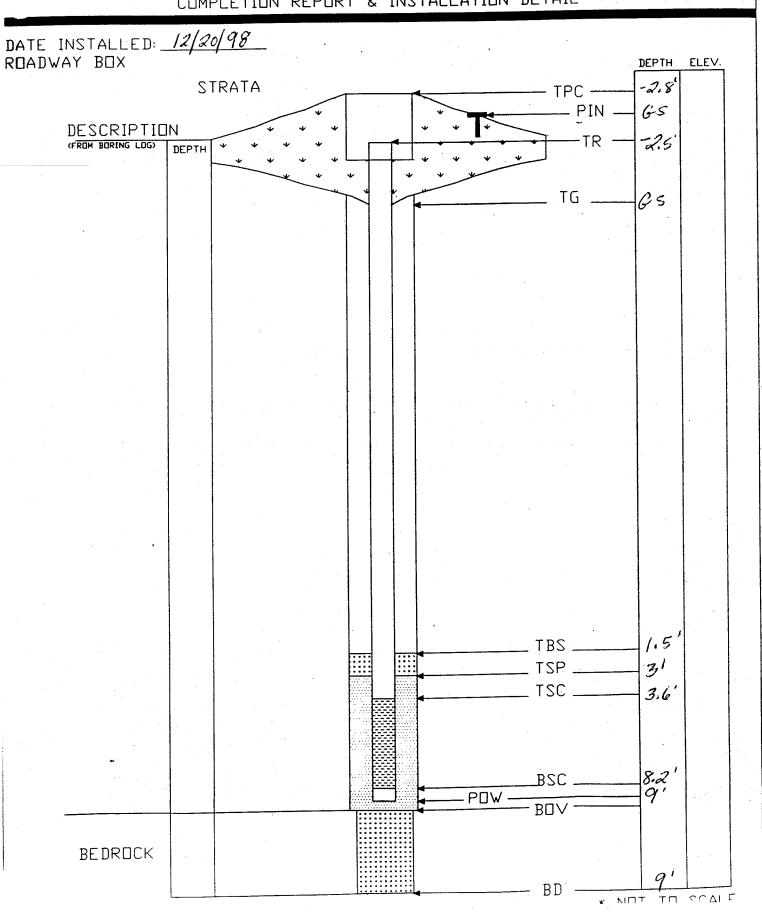


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WELL NUMBER: MW4-11

| CLIENT/PROJECT:<br>LOCATION:                                                                        | Senera Armo                                                                             | J Depot                   | PROJE<br>INSPE<br>CHECK            | CT NO: 73<br>ECTOR: 64<br>ED BY:               | 34539-0<br>CB                                                              | 7/001            |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------|------------------------------------|------------------------------------------------|----------------------------------------------------------------------------|------------------|
| DRILLING CONTRACT DRILL DRILLING COMPLET BORING DE DRILLING METHOR BORING DIAMETER                  | CER: <u>S. Breeds</u><br>TED: <u>13/20/98</u><br>PTH: <u>9'</u><br>O(S): <u>4'4" HS</u> | 4                         | INSTALL<br>SURFACE<br>COMPLETION C | ALLATION ST<br>ATION COMP<br>COMPLETION        | PLETED: 70<br>N DATE: 10<br>R/CREW: 10                                     | 1/20/98 2/20/98  |
| ASSOCIATED SWMU/<br>COORDINATE SYS<br>DA<br>ELEVATIONS:                                             | TEM: NG                                                                                 | NORTHI<br>VD 1929<br>TOC: | NG:                                | TPC:                                           | EASTING: _                                                                 |                  |
| PROTECTIVE CASING                                                                                   |                                                                                         | DIAMETER: 4"              | L                                  | ength: 5                                       | <i>i</i>                                                                   |                  |
| RISER: TR: -2.                                                                                      | 5' TYPE: 1/V                                                                            | DIAMETE                   | R: <u>2</u> 4 L                    | ength: <i>6</i>                                | 5. 1'                                                                      |                  |
| SCREEN:<br>TSC: 3,6'                                                                                | <u> </u>                                                                                | OLAMETE                   | R: <u>2"</u> L                     | ength: <u>4,</u>                               | 6                                                                          | SLOT<br>SIZE: /O |
| POINT OF WELL:(SILT                                                                                 |                                                                                         | <i>/</i> B                | sc: <u>8.2′</u>                    | POW:                                           | ·/                                                                         |                  |
| SURFACE SEAL:                                                                                       | ТҮРЕ: <u><i>G с (</i></u>                                                               | DIAMETEI                  | R: <u>J'</u>                       | THICK                                          | NESS:                                                                      | 1'.              |
| GROUT:                                                                                              | TG: <u>6</u> 5                                                                          | TYPE: Sand + G.           | ravel LEN                          | NGTH: /. (                                     | 5′                                                                         |                  |
| SEAL: 7                                                                                             | TBS: //5'                                                                               | TYPE: Bentonit.           | <u>LEN</u>                         | NGTH: /                                        | 5'                                                                         |                  |
| SAND PACK:                                                                                          | SP: 3.0', 3.5'                                                                          | TYPE: #00, #0             | LEN                                | NGTH: 6                                        | .0'                                                                        |                  |
| COMMENTS:                                                                                           |                                                                                         |                           |                                    |                                                |                                                                            |                  |
| LEGEND (DEPTH TO) TPC-TOP OF PROTECTR-TOP OF RISER PIN-SURVEYED GROTG-TOP OE GROUT BD-BOTTOM OF DRI | TIVE CASING:<br>OUND SURFACE<br>LL HOLE                                                 | * ALL MEAS                | UREMENTS REF                       | TSP-TOP O<br>TSC-TOP O<br>BSC-BOTT<br>POW-POIN | OF BENTON<br>OF SANDPA<br>OF SCREEN<br>OM OF SCR<br>NT OF WELI<br>O GROUND | CK<br>LEEN       |

WELL: MW 4-11

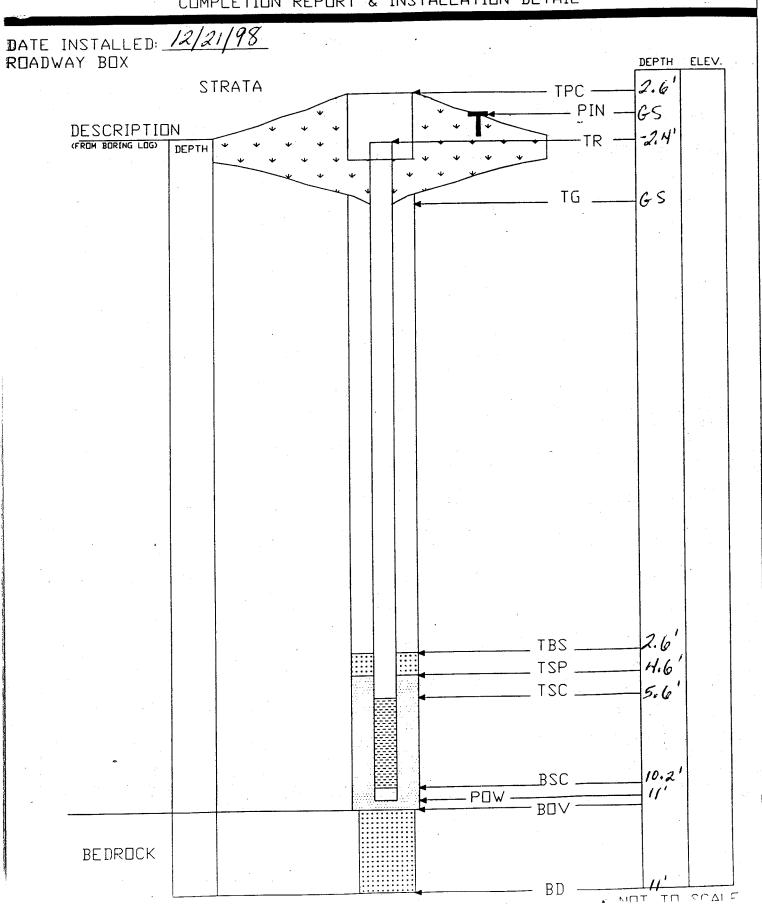


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WELL NUMBER: MW 4-12

| CLIENT/PROJECT: Seneca Hung Deg<br>LOCATION: Sead 4                                                                                                               | PROJECT NO: 734539 - 01001 INSPECTOR: 1LB CHECKED BY:                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DRILLING CONTRACTOR: Maxim  DRILLER: S. Ripe ds  DRILLING COMPLETED: 12/21/98  BORING DEPTH: 11'  DRILLING METHOD(S): 4'1," HSA  BORING DIAMETER(S): 8"           | POW DEPTH: //  INSTALLATION STARTED: 12/21/93/  INSTALLATION COMPLETED: 12/21/93/  SURFACE COMPLETION DATE: 1/4/99  COMPLETION CONTRACTOR/CREW: Maxim/Bixeds  BEDROCK CONFIRMED: Y |
| ASSOCIATED SWMU/AOC: SEAD  COORDINATE SYSTEM:  DATUM: NGVD 19  ELEVATIONS: PIN: T                                                                                 | NORTHING: EASTING:  29 OC: TPC:                                                                                                                                                    |
| PROTECTIVE CASING:  TYPE: 5tee(                                                                                                                                   | eter: 4" length: 5'                                                                                                                                                                |
| RISER: TR: -2. 4' TYPE: PUC                                                                                                                                       | DIAMETER: 2" LENGTH: 8.0'                                                                                                                                                          |
| SCREEN: TSC: 5.6 TYPE: PVC                                                                                                                                        | DIAMETER: 2" LENGTH: 4.6' SIZE: 10                                                                                                                                                 |
| POINT OF WELL:(SILT SUMP)  TYPE: PVC                                                                                                                              | BSC: <u>/0, 2'</u> POW: <u>//</u>                                                                                                                                                  |
|                                                                                                                                                                   | DIAMETER: 3' THICKNESS: 1'                                                                                                                                                         |
| GROUT: TG: 65 TY                                                                                                                                                  | PE: Soud & Grave LENGTH: 2.6'                                                                                                                                                      |
| SEAL: TBS: 2.6' TY                                                                                                                                                | PE: Bentonite LENGTH: 20°                                                                                                                                                          |
| SAND PACK: TSP: 4,6', 5,6' TY                                                                                                                                     | PE: # 00, # 0 LENGTH: 6. 4'                                                                                                                                                        |
| COMMENTS:                                                                                                                                                         |                                                                                                                                                                                    |
| LEGEND (DEPTH TO):  TPC-TOP OF PROTECTIVE CASING:  TR-TOP OF RISER  PIN-SURVEYED GROUND SURFACE  TG-TOP OE GROUT  BD-BOTTOM OF DRILL HOLE  BOV-BASE OF OVERBURDEN | TBS-TOPOF BENTONITE SEAL TSP-TOP OF SANDPACK TSC-TOP OF SCREEN BSC-BOTTOM OF SCREEN POW-POINT OF WELL * ALL MEASUREMENTS REFERENCED TO GROUND SURFACE                              |

WELL: MW 4-12



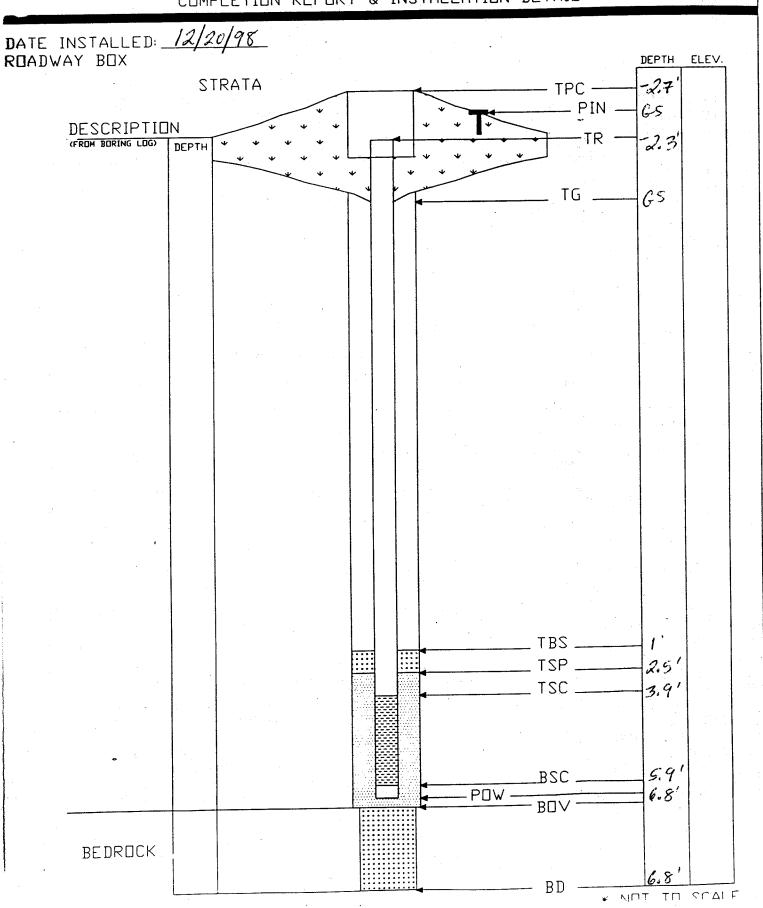
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|                           |     |    |    |      |

WELL NUMBER: 116 4-13

| CLIENT/PROJECT:<br>LOCATION:                                                                                                                | Seneca for<br>Sead 4                    | ny Dupot          |              | PROJE<br>INSPE<br>CHECK          | ECTOR: _                            | 734539 -                                                          | 01001                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------|--------------|----------------------------------|-------------------------------------|-------------------------------------------------------------------|------------------------------------------------|
| DRILLING CONTRACTOR: DRILLER: DRILLING COMPLETED: BORING DEPTH: DRILLING METHOD(S): BORING DIAMETER(S):                                     | S. Breed<br>12/20/98<br>6.7'<br>4 4 4 H |                   | CO           | INSTALI<br>SURFACE<br>MPLETION C | ALLATION ATION CO COMPLET CONTRACT  | OW DEPTH: I STARTED: OMPLETED: TON DATE: FOR/CREW: ONFIRMED:      | 12/20/98<br>12/20/98<br>117/99<br>Maxim/Breads |
| ASSOCIATED SWMU/AOC<br>COORDINATE SYSTEM<br>DATUM<br>ELEVATIONS: PIN                                                                        | [:                                      | NGVD 1929<br>TOC: | NORTHING:    |                                  |                                     | EASTING                                                           | :                                              |
| PROTECTIVE CASING:<br>TYPE:                                                                                                                 | Steel                                   | DIAMETE           | R: <i>4"</i> | L                                | ENGTH: _                            | 5'                                                                |                                                |
| RISER: TR: $-2.3'$                                                                                                                          | TYPE: _                                 | Pvc               | DIAMETER:    | 2" L                             | ENGTH:                              | 6.2'                                                              |                                                |
| SCREEN:<br>TSC: 3,9'                                                                                                                        | TYPE:                                   | PVC               | DIAMETER:    | <i>2"</i> ப                      | ENGTH: _                            | 2'                                                                | SLOT<br>SIZE: /O                               |
| POINT OF WELL:(SILT SUM                                                                                                                     |                                         | PVC               | BSC:         | 5.9'                             | POW:_                               | 6.7'                                                              |                                                |
| SURFACE SEAL:                                                                                                                               | TYPE: <u>(</u>                          | rout              | DIAMETER:    | 2'                               | ТНІ                                 | CKNESS:                                                           | 1'                                             |
| GROUT: TG:                                                                                                                                  | G.S                                     | TYPE: S           | and + Grasel | LEN                              | NGTH: _                             | 1'                                                                |                                                |
| SEAL: TBS:                                                                                                                                  | 1'                                      | TYPE: 1           | Pentantite   | LEN                              | NGTH:                               | 1.5'                                                              |                                                |
| SAND PACK: TSP:                                                                                                                             | 2.51, 3.01                              | TYPE:             | #00, #0      | LEN                              | IGTH: _                             | 4.2'                                                              |                                                |
| COMMENTS:                                                                                                                                   |                                         |                   |              |                                  |                                     |                                                                   |                                                |
| LEGEND (DEPTH TO):  TPC-TOP OF PROTECTIVE  TR-TOP OF RISER  PIN-SURVEYED GROUNE  TG-TOP OE GROUT  BD-BOTTOM OF DRILL H  OV-BASE OF OVERBURE | SURFACE                                 | •                 | ALL MEASURE  | MENTS REF                        | TSP-TC<br>TSC-TC<br>BSC-BC<br>POW-P | POF BENTO P OF SANDE OF OF SCREE OTTOM OF SC OINT OF WE OTO GROUN | ACK<br>IN<br>CREEN<br>LL                       |

WELL:

mw 4-13



#### COMPLETION REPORT OF WELL No. MW5-1

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 03/16/94

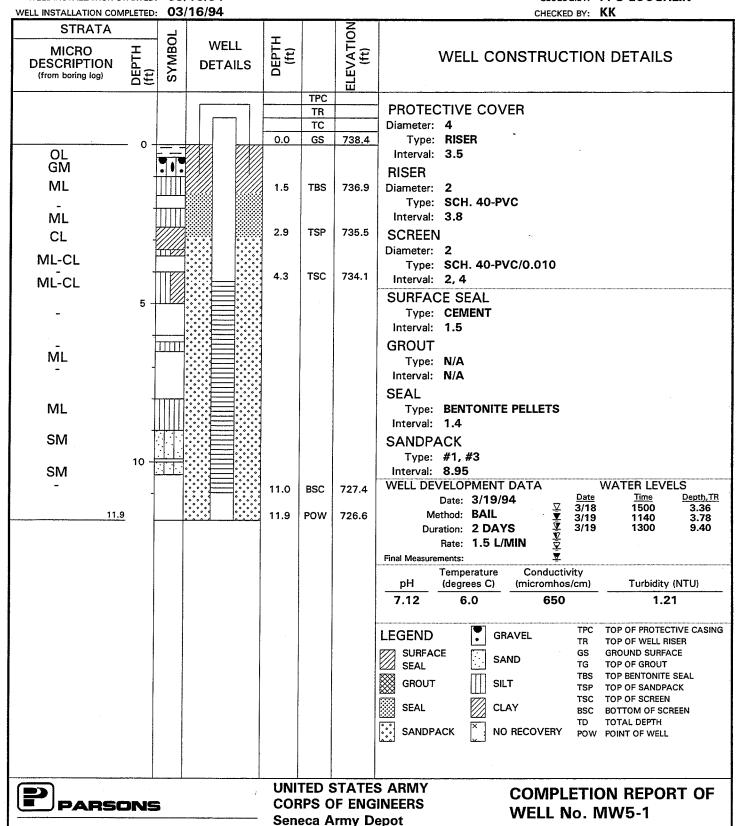
ENGINEERING-SCIENCE, INC.

WELL LOCATION (N/E): 998728.7 750506.4

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 738.4

**DATUM: NAD 1983** GEOLOGIST: F. O'LOUGHLIN



#### COMPLETION REPORT OF WELL No. MW5-2

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCs

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 03/04/94

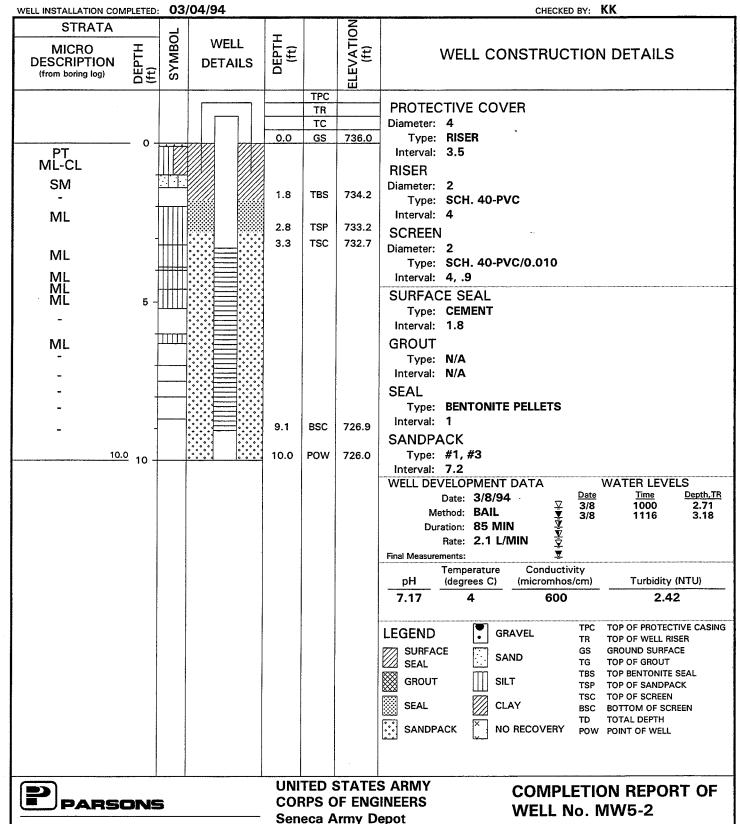
ENGINEERING-SCIENCE, INC.

WELL LOCATION (N/E): 998755.5 750226.3

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 736.0

**DATUM: NAD 1983** GEOLOGIST: F. O'LOUGHLIN



#### **COMPLETION REPORT OF WELL No. MW5-3**

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: **EMPIRE SOILS INVESTIGATIONS** 

DRILLING METHOD: HOLLOW STEM AUGER

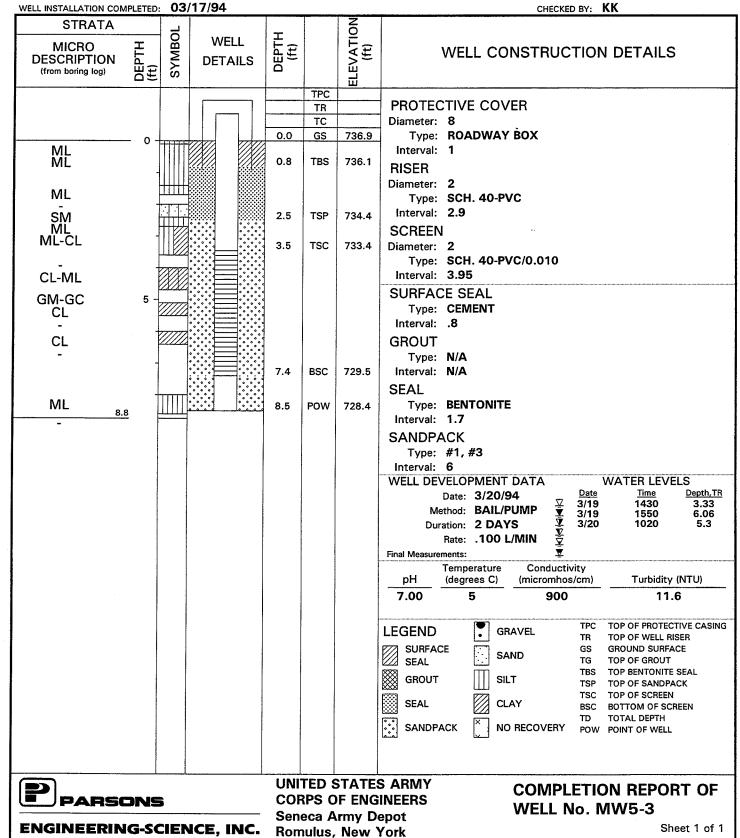
WELL INSTALLATION STARTED: 03/17/94

WELL LOCATION (N/E): 998884.9 750255.7

REFERENCE COORDINATE SYSTEM: NEW YORK STATE PLAN

GROUND SURFACE ELEVATION (ft): 736.9

DATUM: NAD 1983
GEOLOGIST: F. O'LOUGHLIN



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| OVERBURDEN W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ONITORING WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| COMPLETION REPORT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | & INSTALLATION DETAIL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| PROTECTIVE R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SER COMPLETION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | OF WELL #: MW/I-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| PROJECT: 10 SWMU -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | PROJECT NO:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| LOCATION: SEAD -11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | INSPECTOR: ES/LB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| DRILLING CONTRACTOR: Empire                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DRILLER: Alan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | POW DEPTH: 14,2'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| DRILLING COMPLETED: 11/3/93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | INSTALLATION STARTED: 11/3/93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| BORING DEPTH: 14.2'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | INSTALLATION COMPLETED: 11/3 /93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| DRILLING METHOD(S): HSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | SURFACE COMPLETION DATE: /1/3/93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| BORING DIAMETER(S): 842 1/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | COMPLETION CONTRACTOR/CREW: Empire                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| ASSOCIATED SWMU/AOC:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | BEDROCK CONFIRMED (Y/N?)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| PROTECTIVE SURFACE CASING:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DIAMETER: 4" Y 4" Stel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | LENGTH: 5'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| RISER:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TR: TYPE: PVC-40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DIAMETER: 2" LENGTH:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| SCREEN:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | SLOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| TSC: 6.1' TYPE: PVC - 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | DIAMETER: 2" LENGTH: 2" SIZE: 001"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| POINT OF WELL: (SILT SUMP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | DIAMETER: 2" LENGTH: 2" SIZE: 001"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| POINT OF WELL: (SILT SUMP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| POINT OF WELL: (SILT SUMP)  TYPE: PVC powif BSC: 13.5'  GROUT:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | POW: 14.2" J.S Doin-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC powif BSC: /3.5'  GROUT:  TG: 6.0 TYPE: W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | POW: 14.2 0.5 Doin!                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC powif BSC: /3,5'  GROUT:  TG:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | POW: 14.2 9.5 DO:n-1  17.3 Euren - Length: 3.5  Tage - 2.5 - Length: 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC powif BSC: /3,5'  GROUT:  TG:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | POW: 14.2 0.5 Doin!                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC powif BSC: /3,5'  GROUT:  TG:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | POW: 14.2 9.5 DO:n-1  17.3 Euren - Length: 3.5  Tage - 2.5 - Length: 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC powif BSC: /3.5'  GROUT:  TG: 8.0 TYPE: 20  SEAL: TBS: 3.6' TYPE: P.01  SAND PACK: TSP: 4.6' TYPE: 3  SURFACE COLLAR:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | POW: 14.2" 3.5 DO:n-1  2.50 Do: |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC power BSC: 13.5'  GROUT:  TG: 5.0 TYPE: 200  SEAL: TBS: 3.6' TYPE: Power Surface Collar:  TYPE: 200  TYPE | POW: 14.2 9.5 DO:n=  27.5 DO:n=  27.5 DO:n=  2.5 DO:n=  |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC powif BSC: /3.5'  GROUT:  TG: 8.0 TYPE: 20  SEAL: TBS: 3.6' TYPE: P.01  SAND PACK: TSP: 4.6' TYPE: 3  SURFACE COLLAR:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | POW: 14.2 3.5 DO: n=  18.8 Ear Ear 2 LENGTH: 50  TOP 3 3 5 = LENGTH: 1.0  Silica LENGTH: 0  HICKNESS CENTER: 1  THICKNESS EDGE: 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC point BSC: 13.5'  GROUT:  TG: 5.0 TYPE: 20  SEAL: TBS: 3.6' TYPE: P.01  SAND PACK: TSP: 4.6' 47 TYPE: 4  SURFACE COLLAR:  TYPE: 200 TYPE: 4  CENTRALIZER DEPTHS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | POW: 14.2" 3.5 DO:n-1  2.50 Do: |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC point BSC: 13.5'  GROUT:  TG: 5.0 TYPE: 20  SEAL: TBS: 3.6' TYPE: P.01  SAND PACK: TSP: 4.6' 47 TYPE: 4  SURFACE COLLAR:  TYPE: 200 TYPE: 4  CENTRALIZER DEPTHS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | POW: 14.2 3.5 DO: n=  18.8 Ear Ear 2 LENGTH: 50  TOP 3 3 5 = LENGTH: 1.0  Silica LENGTH: 9  HICKNESS CENTER: 1 THICKNESS EDGE: 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC point BSC: 13.5'  GROUT:  TG: 8.0 TYPE: 20  SEAL: TBS: 3.6' TYPE: 20  SAND PACK: TSP: 4.6' 5' TYPE: 3  SURFACE COLLAR:  TYPE: 20 TYPE: 3  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | POW: 14.2 3.5 DO: n=  18.8 Ear Ear 2 LENGTH: 50  TOP 3 3 5 = LENGTH: 1.0  Silica LENGTH: 9  HICKNESS CENTER: 1 THICKNESS EDGE: 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC point BSC: 13.5'  GROUT:  TG: 8.0 TYPE: 20  SEAL: TBS: 3.6' TYPE: 20  SAND PACK: TSP: 4.6' 5' TYPE: 3  SURFACE COLLAR:  TYPE: 20 TYPE: 3  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | POW: 14.2 3.5 DO: n=  18.8 Ear Ear 2 LENGTH: 50  TOP 3 3 5 = LENGTH: 1.0  Silica LENGTH: 9  HICKNESS CENTER: 1 THICKNESS EDGE: 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC point BSC: 13.5'  GROUT:  TG: 8.0 TYPE: 20  SEAL: TBS: 3.6' TYPE: 20  SAND PACK: TSP: 4.6' 5' TYPE: 3  SURFACE COLLAR:  TYPE: 20 TYPE: 3  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | POW: 14.2 3.5 DO: n=  18.8 Ear Ear 2 LENGTH: 50  TOP 3 3 5 = LENGTH: 1.0  Silica LENGTH: 9  HICKNESS CENTER: 1 THICKNESS EDGE: 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| POINT OF WELL: (SILT SUMP)  TYPE: PVC point BSC: 13.5'  GROUT:  TG: 8.0 TYPE: 20  SEAL: TBS: 3.6' TYPE: 20  SAND PACK: TSP: 4.6' 5' TYPE: 3  SURFACE COLLAR:  TYPE: 20 TYPE: 3  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | POW: 14.2 3.5 DO: n=  18.8 Ear Ear 2 LENGTH: 50  TOP 3 3 5 = LENGTH: 1.0  Silica LENGTH: 0  HICKNESS CENTER: 1  THICKNESS EDGE: 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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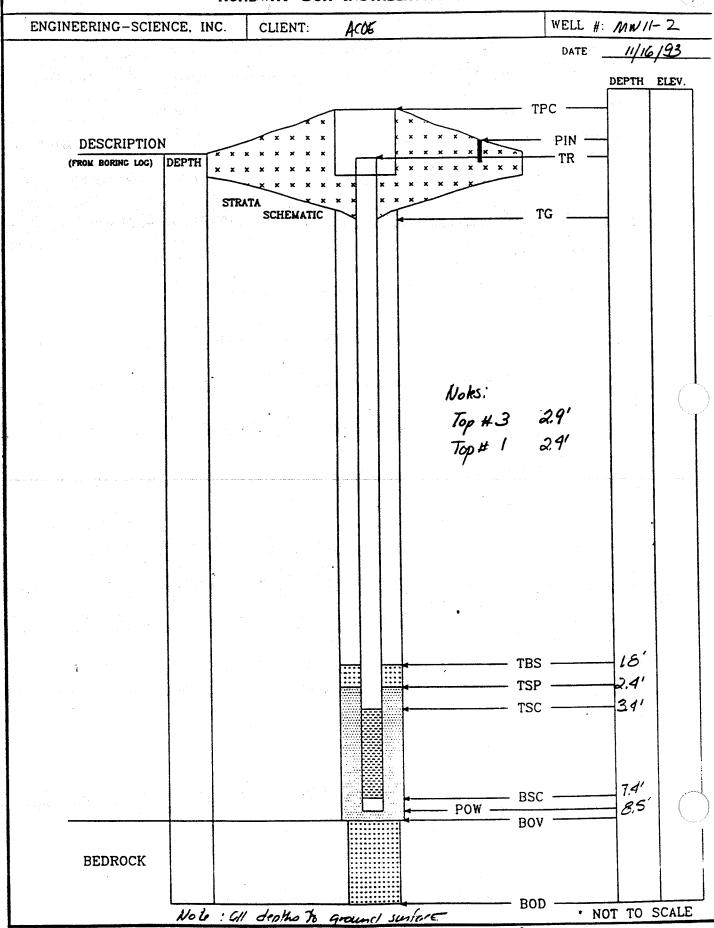
PAGE 1 OF 2

### OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

WELL #: MW/(- ) ACOE ENGINEERING-SCIENCE, INC. CLIENT: DATE: \_ DEPTH ELEV. TPC TR PIN DESCRIPTION (FROM BORING LOG) DEPTH SCHEMATIC Note: Top of #3 sand Top of #1 sord Total Scien- 7' Bottom - 5' screen Top - Q' Screen Connection - 0.4' 6.1 TSC POW BOV **BEDROCK** BOD . NOT TO SCALE depths measured from ground surface.

| OVEDBIIDDEN                  | PAGE 1 OF 2                                |
|------------------------------|--------------------------------------------|
| OVERBURDEN                   | MONITORING WELL                            |
| COMPLETION REPORT            | T & INSTALLATION DETAIL                    |
| KOADWAY BOX -                | SURFACE COMPLETION                         |
|                              | ACOE WELL #: MW/1-2                        |
| PROJECT: 10 SWMU             | PROJECT NO:                                |
| LOCATION: SEAD 11            | INSPECTOR: ES                              |
|                              | CHECKED BY:                                |
| DRILLING CONTRACTOR: Empire  | POW DEPTH: 8,5                             |
| DRILLER: John W.             |                                            |
| DRILLING COMPLETED: 11/16/93 |                                            |
| BORING DEPTH: 8,5            |                                            |
| DRILLING METHOD(S): HSA      | SURFACE COMPLETION DATE: ///// /93         |
| BORING DIAMETER(S): 81/2"    | COMPLETION CONTRACTOR/CREW: Empire         |
| ASSOCIATED SWMU/AOC: //      | BEDROCK CONFIRMED (Y/N?)                   |
| PROTECTIVE SURFACE CASING:   | ESTIMATED GROUND ELEVATION:                |
| _                            | •                                          |
| DIAMETER: 4"x1" STRC         | LENGTH:                                    |
| RISER:                       |                                            |
| TR: TYPE: PYC-40             | DIAMETER: 2" LENGTH:                       |
| SCREEN:                      | SLOT                                       |
| TSC34 TYPE:_PVC-40           | 1114                                       |
| POINT OF WELL: (SILT SUMP)   | DIAMETER: "12" LENGTH: 4" SIZE: 0.01"      |
| TYPE: PVC POINT BSC: 7, 4    | 200                                        |
| GROUT:                       | POW: <u>8.5</u>                            |
| ^                            |                                            |
| TG: Ground TYPE:             | ament-benjamite LENGTH: 1/8                |
| PE AT -                      | · / / / / / / / / / / / / / / / / / / /    |
| 0.1                          |                                            |
| TIPE 9                       | 13+#/ LENGTH: 6,1'                         |
| SURFACE COLLAR:              |                                            |
| TYPE: Olment RADIUS: 2'x2'   | THICKNESS CENTER: '/' - THICKNESS EDGE: /' |
| CENTRALIZER DEPTHS           |                                            |
| DEPTH 1: DEPTH 2:            | DEPTH 3: DEPTH 4:                          |
|                              | DEFIN 4.                                   |
| COMMENTS:                    |                                            |
|                              |                                            |
|                              |                                            |
|                              |                                            |
|                              |                                            |
| * ALL DEPTH MEASI            | UREMENTS REFERENCED TO GROUND SURFACE      |
| EE PAGE 2 FOR SCHEMATIC      | PAGE 1 OF 2                                |

# OVERBURDEN MONITORING WELL ROADWAY BOX INSTALLATION DETAIL



|                                                                                                                                                  | ONITODING WEST                                            |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--|--|--|--|--|
| OVERBURDEN M                                                                                                                                     |                                                           |  |  |  |  |  |
|                                                                                                                                                  | E INSTALLATION DETAIL                                     |  |  |  |  |  |
|                                                                                                                                                  | SER COMPLETION                                            |  |  |  |  |  |
| ENGINEERING-SCIENCE, INC. CLIENT:                                                                                                                | WELL #: MW-11-3                                           |  |  |  |  |  |
| PROJECT: 10-Swmu                                                                                                                                 | PROJECT NO:                                               |  |  |  |  |  |
| LOCATION: SEAD :11                                                                                                                               | INSPECTOR: ES/LB                                          |  |  |  |  |  |
|                                                                                                                                                  | CHECKED BY:                                               |  |  |  |  |  |
| DRILLING CONTRACTOR: Empire                                                                                                                      | POW DEPTH: 90'                                            |  |  |  |  |  |
| DRILLER: A                                                                                                                                       | installation started: 11/4/93                             |  |  |  |  |  |
| DRILLING COMPLETED: 11/4/43                                                                                                                      | INSTALLATION COMPLETED: 11/5/93                           |  |  |  |  |  |
| BORING DEPTH: 9.0'                                                                                                                               | SURFACE COMPLETION DATE: 11/5/93                          |  |  |  |  |  |
| DRILLING METHOD(S):                                                                                                                              | COMPLETION CONTRACTOR/CREW:                               |  |  |  |  |  |
| BORING DIAMETER(S): 842 "                                                                                                                        | BEDROCK CONFIRMED (Y/N?)                                  |  |  |  |  |  |
| ASSOCIATED SWMU/AOC:                                                                                                                             | ESTIMATED GROUND ELEVATION:                               |  |  |  |  |  |
| PROTECTIVE SURFACE CASING:                                                                                                                       |                                                           |  |  |  |  |  |
| DIAMETER: 4"x4" Steel                                                                                                                            | LENGTH: 4'- total length                                  |  |  |  |  |  |
| RISER:                                                                                                                                           | -                                                         |  |  |  |  |  |
| TR: TYPE: PVC-40                                                                                                                                 | DIAMETER: 2" LENGTH:                                      |  |  |  |  |  |
| SCREEN:                                                                                                                                          | SLOT                                                      |  |  |  |  |  |
| TSC: 3.9 TYPE: <u>PVC-40</u>                                                                                                                     | DIAMETER: 2" LENGTH: 4.0' SIZE: 0.01"                     |  |  |  |  |  |
| POINT OF WELL: (SILT SUMP)                                                                                                                       |                                                           |  |  |  |  |  |
| TYPE: PYC point BSC: 7.9'                                                                                                                        | POW: 9.0' 11' betw. Pow and BSC.                          |  |  |  |  |  |
| GROUT:                                                                                                                                           |                                                           |  |  |  |  |  |
| TG: NA TYPE:                                                                                                                                     | LENGTH:                                                   |  |  |  |  |  |
| SEAL: TBS: <u>new surface</u> Type: <u>ben</u>                                                                                                   | boots Dellets LENGTH: 24'                                 |  |  |  |  |  |
|                                                                                                                                                  | tonit Delle 75 LENGTH: 24                                 |  |  |  |  |  |
| SAND PACK: TSP: 24 - # 29 # 3 TYPE: # 3                                                                                                          | 10 1 10 1 10 1 10 10 10 10 10 10 10 10 1                  |  |  |  |  |  |
| SAND PACK: TSP: 24 + 1 29 #3 TYPE: #3                                                                                                            | 10 1 10 1 10 1 10 10 10 10 10 10 10 10 1                  |  |  |  |  |  |
| SURFACE COLLAR:                                                                                                                                  | and # 1 LENGTH: <u>6.6'</u>                               |  |  |  |  |  |
| SURFACE COLLAR:  TYPE: <u>Gment</u> RADIUS: <u>2'x2'</u> T                                                                                       | and # 1 LENGTH: <u>6.6'</u>                               |  |  |  |  |  |
| SURFACE COLLAR:  TYPE:                                                                                                                           | HICKNESS CENTER: 1' THICKNESS EDGE: 1'                    |  |  |  |  |  |
| SURFACE COLLAR:  TYPE: <u>Gment</u> RADIUS: <u>2'x2'</u> T                                                                                       | and # 1 LENGTH: <u>6.6'</u>                               |  |  |  |  |  |
| SURFACE COLLAR:  TYPE: RADIUS:                                                                                                                   | thickness center:                                         |  |  |  |  |  |
| SURFACE COLLAR:  TYPE: Gment RADIUS: 2'x2' T  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2:  COMMENTS:                                                   | thickness center:                                         |  |  |  |  |  |
| SURFACE COLLAR:  TYPE: <u>Gment</u> RADIUS: <u>2'x2'</u> T  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2:                                                | thickness center:                                         |  |  |  |  |  |
| SURFACE COLLAR:  TYPE: RADIUS:                                                                                                                   | thickness center:                                         |  |  |  |  |  |
| SURFACE COLLAR:  TYPE: Coment RADIUS: 2'x2' T  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2:  COMMENTS:  Will screen is 4.0'  Depth to Pow from BSC 1.1' | HICKNESS CENTER: 1' THICKNESS EDGE: 1'  DEPTH 3: DEPTH 4: |  |  |  |  |  |
| SURFACE COLLAR:  TYPE: Coment RADIUS: 2'x2' T  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2:  COMMENTS:  Will screen is 4.0'  Depth to Pow from BSC 1.1' | thickness center:                                         |  |  |  |  |  |

PAGE 1 OF 2

### OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

WELL #: MWII-3 ENGINEERING-SCIENCE, INC. CLIENT: DATE: \_ DEPTH ELEV. TR DESCRIPTION PIN (FROM BORING LOC) DEPTH TG Notes: Top # 3 Sand 2.9' Top # 1 Sand 2.4' Protect. Casing! 2.5' Shekup 1.5' into ground 1.0' Cut off to refusinfacE TSP 2.4 TSC ' 3.9 40' Screen. 1.1 6000 70 POW 25 BOV BEDROCK All depths measured from ansumed since . NOT TO SCALE

PAGE 1 OF 2 OVERBURDEN MONITORING WELL **COMPLETION REPORT & INSTALLATION DETAIL** PROTECTIVE RISER COMPLETION ENGINEERING-SCIENCE, INC. CLIENT: WELL #: MW/1-4 PROJECT: 10 SWMU PROJECT NO: LOCATION: DEAD -11 INSPECTOR: E/S / LB CHECKED BY: DRILLING CONTRACTOR: EMPIRE POW DEPTH: 10,5 DRILLER: INSTALLATION STARTED: 11/4/93 DRILLING COMPLETED: 11/4/93 INSTALLATION COMPLETED: BORING DEPTH: 10.5 SURFACE COMPLETION DATE: DRILLING METHOD(S): COMPLETION CONTRACTOR/CREW: Empire HSA BORING DIAMETER(S): 81/2" BEDROCK CONFIRMED (Y/N?) \_\_\_y ASSOCIATED SWMU/AOC: ESTIMATED GROUND ELEVATION: PROTECTIVE SURFACE CASING: DIAMETER: 4"x4" Steel LENGTH: 29' Stickup RISER: TYPE: PYC-40 DIAMETER: 2" LENGTH: SCREEN: TSC: 4.8 SIZE: 0.01 POINT OF WELL: (SILT SUMP) TYPE: PYC point 9.8' BSC: POW: 10.5' 0.5' Point GROUT: TG: TYPE: Com- ben bonito LENGTH: SEAL: 28' TBS: TYPE: bentonite pellets LENGTH: SAND PACK: 3.3' TYPE: #3 and #1 LENGTH: SURFACE COLLAR: TYPE: Cerred RADIUS: 2/2 THICKNESS CENTER: / ' THICKNESS EDGE: / CENTRALIZER DEPTHS DEPTH 1: -DEPTH 2: \_\_\_\_\_ DEPTH 3: \_\_\_\_ COMMENTS: \* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

### OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

WELL #: ACOE MW11-4 ENGINEERING-SCIENCE, INC. CLIENT: DATE: DEPTH TPC TR DESCRIPTION PIN (FROM BORING LOG) DEPTH ground Noks: Top of # 3 Sand 3.8' Top of # 1 sand 3.3' Prot. Casing dipth 25' Shick up 2.5' 2.8 TBS 3.3 48° 5.4 TSC .2 connection <del>-B</del>SC POW 10.5 BOV **BEDROCK** - BOD deptho measured from ground surber · NOT TO SCALE

# OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

| PARSONS ENGINEERING S        | CIENCE, INC.              | CLIENT:      |            |                                                  |             | WELL#: 1   | 41./// - :-          |  |
|------------------------------|---------------------------|--------------|------------|--------------------------------------------------|-------------|------------|----------------------|--|
| PROJECT: SEAD-               | 11 ee/ca                  |              |            | PI                                               | ROJECT NO:  | 73454      |                      |  |
| LOCATION: Seneca Army Deport |                           | -            |            | NSPECTOR:                                        |             | 3-01001    |                      |  |
|                              | , , , , ,                 |              |            |                                                  | ECKED BY:   | KKS        |                      |  |
| DRILLING CONTRACTOR:         | ρ                         | + 1/0150     |            |                                                  |             | 0 -        | , .                  |  |
| DRILLER:                     | Perret + Wolfe Todd Merch |              |            | POW DEPTH:                                       |             |            | 9.5'                 |  |
| DRILLING COMPLETED:          | _                         |              |            | INSTALLATION STARTED:                            |             |            | 10/26/00             |  |
| BORING DEPTH:                | 11.0                      | 10/26/00     |            | INSTALLATION COMPLETED: SURFACE COMPLETION DATE: |             |            | 10/26/00             |  |
| DRILLING METHOD(S):          | H5 A                      |              | -          | COMPLETION CONTRACTOR/CREW:                      |             |            | + Wolfe              |  |
| BORING DIAMETER(S):          |                           | et           |            | ROCK CONFIRM                                     | •           | Y          | 40176                |  |
| ASSOCIATED SWMU/AOC:         | SEA                       | D ~ 11       |            | ED GROUND EI                                     | •           |            |                      |  |
| PROTECTIVE SURFACE CAS       |                           |              |            |                                                  |             |            |                      |  |
|                              | DIAMETER:                 | 4.0"         | LENGTH:    | 4',2"                                            |             | TOR:       | +2.6                 |  |
| RISER:                       |                           | 11           |            |                                                  |             |            |                      |  |
| тос: _ <sup>+</sup> 25       | TYPE:                     | 2 Sched. 40  | DIAMETER:  | <u> </u>                                         | LENGTH:     | 6.74       | •                    |  |
| SCREEN:                      |                           | PVC          |            |                                                  |             |            | SLOT                 |  |
| TSC: 4,24                    | TYPE:                     |              | DIAMETER:  | 2"                                               | LENGTH:     | 4.58       | SIZE: O.O.O          |  |
| POINT OF WELL: (SILT SUMP    | )                         |              |            |                                                  |             | ,          |                      |  |
| YPE: Point - PVC             | BSC:                      | 8.82         | POW        | 9.5                                              |             |            |                      |  |
| GROUT:                       |                           |              |            | <b>3</b> 990                                     |             |            |                      |  |
| TG                           | ·_ + 0.5 ′                | TYPE: (      | Quickcrete | LENGTH:                                          |             | 2,25       |                      |  |
| SEAL: TBS                    | 71.75                     |              | Bentonite  | LENGTH:                                          |             | 2.0′       |                      |  |
| SAND PACK: TSP               | -4,25                     | TYPE:        | <u>වේ</u>  | LENGTH A                                         | bove<br>SC) | 0.83       |                      |  |
| SURFACE COLLAR:              | į.                        |              |            |                                                  | sc/ -       |            | -                    |  |
| TYPE: Quickacte              | ,<br>RADIUS:              | 2.0          | THICK      | NESS CENTER:                                     | 1.35        | THICKNES   | ss edge: <u>0,25</u> |  |
| CENTRALIZER DEPTHS           |                           |              |            |                                                  |             |            | 11                   |  |
| DEPTH 1: N/A                 | DEPTH 2:_                 | N/A          | DEPTH 3:   | N/A                                              |             | DEPTH 4:   | N/A                  |  |
| COMMENTS:                    |                           |              |            |                                                  |             |            |                      |  |
| •                            |                           |              |            |                                                  |             |            |                      |  |
|                              |                           |              |            |                                                  |             |            |                      |  |
|                              |                           |              |            |                                                  |             |            |                      |  |
|                              |                           |              |            |                                                  |             |            |                      |  |
|                              | •                         | ALL DEPTH ME | ASUREMENT: | S REFERENCED                                     | TO GROU     | ND SURFACE |                      |  |
| SEE PAGE 2 FOR SCHEMA        | TIC                       |              |            |                                                  |             |            |                      |  |

PAGE 1\_OF\_2

# OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

| PARSONS ENGINEERING SC        | IENCE, INC.   | CLIENT:                                   |              |                                        |                | WELL#: M   | W11-6              |
|-------------------------------|---------------|-------------------------------------------|--------------|----------------------------------------|----------------|------------|--------------------|
| PROJECT: SEAD -11             | ee/ca         | W-14-11-11-11-11-11-11-11-11-11-11-11-11- | _            | PR                                     | ROJECT NO:     | 734543     | 5-01001            |
| LOCATION: Serece              | Army De       | pot                                       | _            | n                                      | NSPECTOR: _    | KKS        |                    |
|                               |               | •                                         |              | СН                                     | ECKED BY: _    |            |                    |
| DRILLING CONTRACTOR:          | Parret W      | lel fe                                    |              | Po                                     | OW DEPTH:      | 8.08       | 1                  |
| DRILLER:                      | Todd in       |                                           |              | NSTALLATION                            | STARTED:       | 10/26      | 100                |
| DRILLING COMPLETED:           | 10/26         | 100                                       | INST         | ALLATION CO                            | OMPLETED:      | 10/26      |                    |
| BORING DEPTH:                 | 8.5           | 1                                         | SURF         | ACE COMPLET                            | TION DATE: _   | 10/27      | 100                |
| DRILLING METHOD(S):           | HSA           |                                           | COMPLETI     | COMPLETION CONTRACTOR/CREW:            |                |            | Todd breach        |
| BORING DIAMETER(S):           | 10 "          |                                           | BEDR         | OCK CONFIRM                            | MED (Y/N?)     | γ          |                    |
| ASSOCIATED SWMU/AOC:          | SEAD          | -11                                       | ESTIMATE     | D GROUND E                             | LEVATION:      |            |                    |
| PROTECTIVE SURFACE CASI       | NG:           |                                           |              |                                        |                |            |                    |
|                               | DIAMETER: _   | 4" I D                                    | LENGTH:      | 42                                     |                | TOR:       | +2.52              |
| riser: , Toc: +2,42           | TYPE:         | PUC                                       | DIAMETER:    | 2.                                     | LENGTH:        | 5,25 (7    | oc) -              |
| SCREEN:                       |               | 0.1.6                                     | ·            |                                        |                |            | SLOT               |
| TSC: 2.82                     | TYPE: _ i     | Nive way                                  | DIAMETER:    | 2"                                     | LENGTH: _      | 4.58       | SIZE: <u>∅,01∂</u> |
| POINT OF WELL: (SILT SUMP)    |               |                                           |              |                                        |                |            |                    |
| YPE: PVC POIN                 | BSC:_         | 7.40                                      | POW:         | 8.08                                   |                |            | :                  |
| GROUT:                        |               |                                           |              |                                        |                |            |                    |
| TG:                           | + 0.25        | TYPE                                      | : Quickerete | LENGTH:                                |                | 1.5        | •                  |
| SEAL: Envisoply TBS:          | 1.32'         |                                           | : Bentonte   |                                        |                | 1.0"       |                    |
| SAND PACK: TSP:               | -2.60<br>2.32 | ·                                         | : 0/00       | LENGTH:                                | Above<br>TSC _ | 0.5        |                    |
| SURFACE COLLAR:               |               | ,                                         |              | ************************************** |                |            |                    |
| TYPE: Quickerite              | RADIUS:       | 2.0                                       | THICK        | NESS CENTER                            | 1.5            | THICKNES   | S EDGE: 0.5        |
| CENTRALIZER DEPTHS            |               |                                           |              |                                        |                |            |                    |
| DEPTH 1: <u>\(\rangle\)/A</u> | DEPTH 2:      | N/A                                       | DEPTH 3:     | N/A                                    | _              | DEPTH 4:   | N/A                |
| COMMENTS:                     |               |                                           |              |                                        |                |            |                    |
|                               |               |                                           |              |                                        |                |            |                    |
|                               |               |                                           |              |                                        |                |            |                    |
|                               |               |                                           |              |                                        |                |            |                    |
|                               |               |                                           |              |                                        |                |            |                    |
|                               | *             | ALL DEPTH M                               | IEASUREMENT: | S REFERENCE                            | D TO GROU      | ND SURFACE |                    |
| SEE PAGE 2 FOR SCHEMAT        | ПC            |                                           |              | _                                      |                |            |                    |

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8.08

10.4

FIGURE A-8

### OVERBURDEN MONITORING WELL **COMPLETION REPORT & INSTALLATION DETAIL**

PROTECTIVE RISER COMPLETION

|                                       |                |                |                 |                          |                                                    |                                       | <u> </u>      |  |  |
|---------------------------------------|----------------|----------------|-----------------|--------------------------|----------------------------------------------------|---------------------------------------|---------------|--|--|
| PARSONS ENGINEERING SO                |                | CLIENT:        |                 |                          |                                                    | WELL#: M                              | W11-7         |  |  |
|                                       | ·11 0=/ce      |                | _               | P                        | ROJECT NO:                                         |                                       | 3-01001       |  |  |
| LOCATION: Sens                        | eca Army Depot |                |                 | INSPECTOR:               |                                                    |                                       |               |  |  |
|                                       |                |                |                 | CH                       | ECKED BY:                                          |                                       |               |  |  |
| DRILLING CONTRACTOR:                  | Parret         | + Wolfe        |                 | P                        | OW DEPTH:                                          | ÷ 5,2                                 | 5'            |  |  |
| DRILLER:                              | Told Merch     |                | _               | INSTALLATION STARTED:    |                                                    |                                       | 10/26/00      |  |  |
| DRILLING COMPLETED:                   | 10/26          | 100            | _ IN            | INSTALLATION COMPLETED:  |                                                    |                                       | 10/26/00      |  |  |
| BORING DEPTH:                         | <i>6.</i>      | 0 '            | SUI             | SURFACE COMPLETION DATE: |                                                    |                                       | 10/27/00      |  |  |
| DRILLING METHOD(S):                   | HSA            | •              | COMPLE          | TION CONTRAC             | TOR/CREW:                                          |                                       |               |  |  |
| BORING DIAMETER(S):                   | 10 "           |                | BEI             | ROCK CONFIR              | MED (Y/N?)                                         | · · · · · · · · · · · · · · · · · · · |               |  |  |
| ASSOCIATED SWMU/AOC:                  | SEAD           | -11            | ESTIMAT         | ED GROUND E              | LEVATION:                                          |                                       |               |  |  |
| PROTECTIVE SURFACE CAS                | ING:           |                |                 |                          |                                                    |                                       |               |  |  |
|                                       | DIAMETER:      | 4.0 T          | <b>D</b> LENGTH | 42                       |                                                    | TOR:                                  | 2.66          |  |  |
| RISER:                                |                | Puc            |                 |                          |                                                    |                                       |               |  |  |
| TOC: + 2.55                           | TYPE:          | Select. 40     | DIAMETER        | = <u>2"</u>              | LENGTH:                                            | 5.05                                  | ÷             |  |  |
| SCREEN:                               |                | PUC            |                 |                          |                                                    |                                       | SLOT          |  |  |
| TSC: 2.5                              | TYPE:          |                | DIAMETER        | 2"                       | LENGTH:                                            | 2,6                                   | SIZE: 0.010   |  |  |
| POINT OF WELL: (SILT SUMP)            |                |                |                 |                          | •                                                  | ,                                     |               |  |  |
| YPE: PVC-Flat                         |                | 5.10           | POV             | v: <u>5.25</u> °         |                                                    | •                                     |               |  |  |
| GROUT:                                |                |                |                 |                          |                                                    |                                       |               |  |  |
| TG:                                   | + 0.25         | TYPE:          | Quekeret        | LENGTH:                  |                                                    | 1.35                                  |               |  |  |
| SEAL: TBS:                            | -1.1'          |                | Bentocite       | *******                  |                                                    | 1.5                                   |               |  |  |
|                                       | -1.6           |                | 0               |                          | 11                                                 | 183                                   |               |  |  |
| SAND PACK: TSP:                       | <u> </u>       | TYPE:          | 00              | LENGTH                   | TSC).                                              |                                       |               |  |  |
| SURFACE COLLAR:                       | :              | 7              |                 |                          |                                                    |                                       | <b>+</b> =    |  |  |
| TYPE: Quickacte                       | RADIUS:        | 2.0            | THIC            | KNESS CENTER             | : <u> 1.35                                    </u> | THICKNES                              | s edge: 0, 25 |  |  |
| CENTRALIZER DEPTHS DEPTH 1: N/A       | D.D.D.         |                |                 | ,                        |                                                    |                                       | 1.            |  |  |
| DEFIN I. N/A                          | DEPTH 2:       | N/A            | DEPTH           | 3: <u>N/A</u>            | <del></del>                                        | DEPTH 4:                              | N/A           |  |  |
| COMMENTS:                             |                |                |                 |                          |                                                    |                                       |               |  |  |
|                                       |                |                |                 |                          |                                                    |                                       |               |  |  |
| •                                     |                |                |                 |                          |                                                    |                                       |               |  |  |
|                                       |                |                |                 |                          |                                                    |                                       |               |  |  |
|                                       |                |                |                 |                          |                                                    |                                       |               |  |  |
| · · · · · · · · · · · · · · · · · · · | ,              | * ALL DEPTH MI | EASUREMEN       | S REFERENCE              | D TO GROU                                          | ND SURFACE                            |               |  |  |
| SEE PAGE 2 FOR SCHEMA                 | TIC            |                | -               |                          |                                                    |                                       |               |  |  |

#### COMPLETION REPORT OF WELL No. MW12A-1

ENGINEERING-SCIENCE, INC.

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

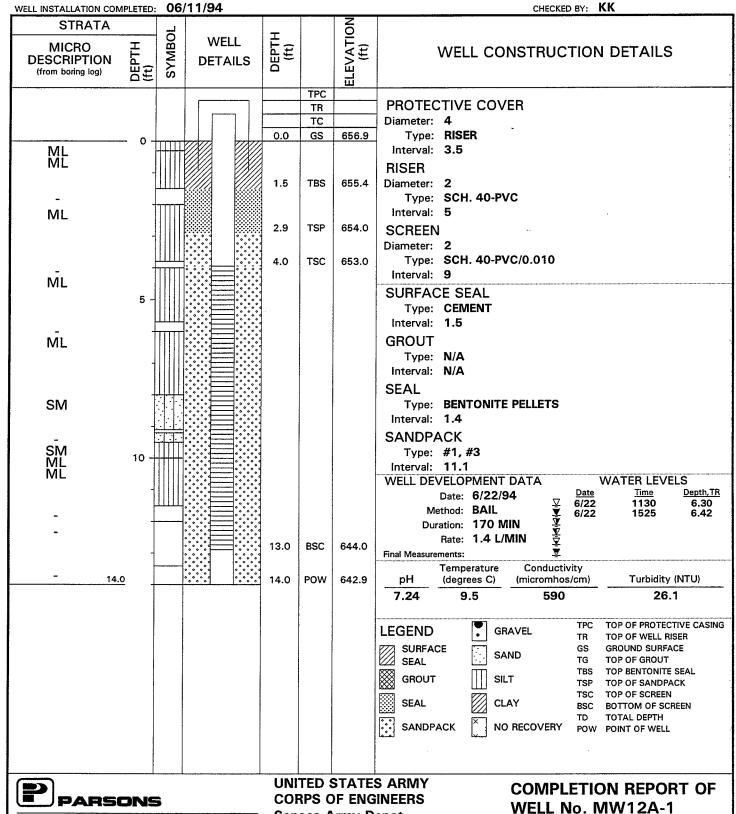
WELL INSTALLATION STARTED: 06/10/94

WELL LOCATION (N/E): 1015496.7 745165.9

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 656.9

**DATUM: NAD 1983** GEOLOGIST: F. O'LOUGHLIN



Seneca Army Depot

#### COMPLETION REPORT OF WELL No. MW12A-2

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 06/11/94

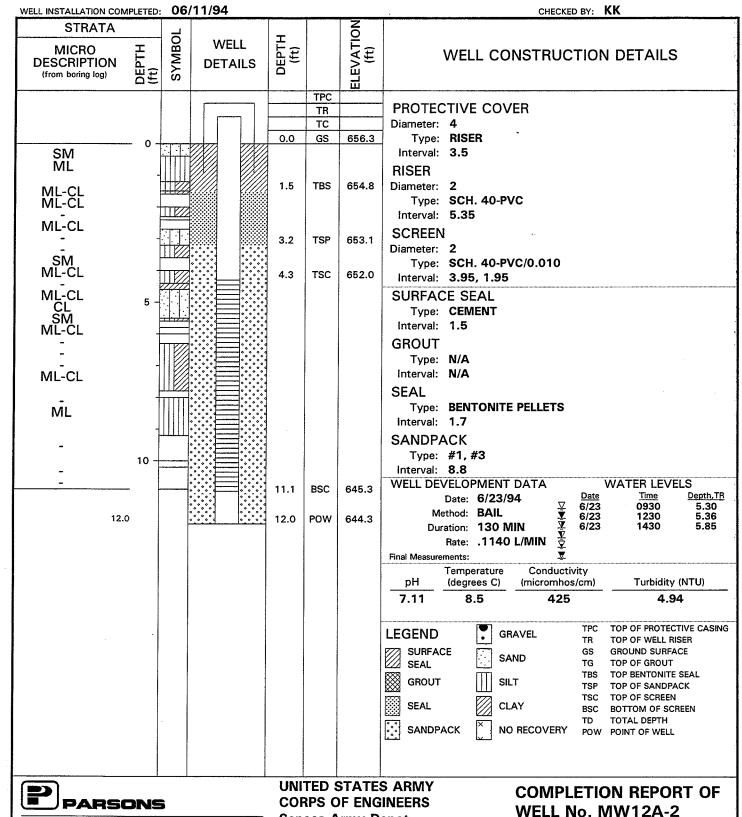
ENGINEERING-SCIENCE, INC.

WELL LOCATION (N/E): 1015117.5 744926.6

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 656.3

**DATUM: NAD 1983** GEOLOGIST: F. O'LOUGHLIN



Seneca Army Depot

#### COMPLETION REPORT OF WELL No. MW12A-3

ENGINEERING-SCIENCE, INC.

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 06/12/94

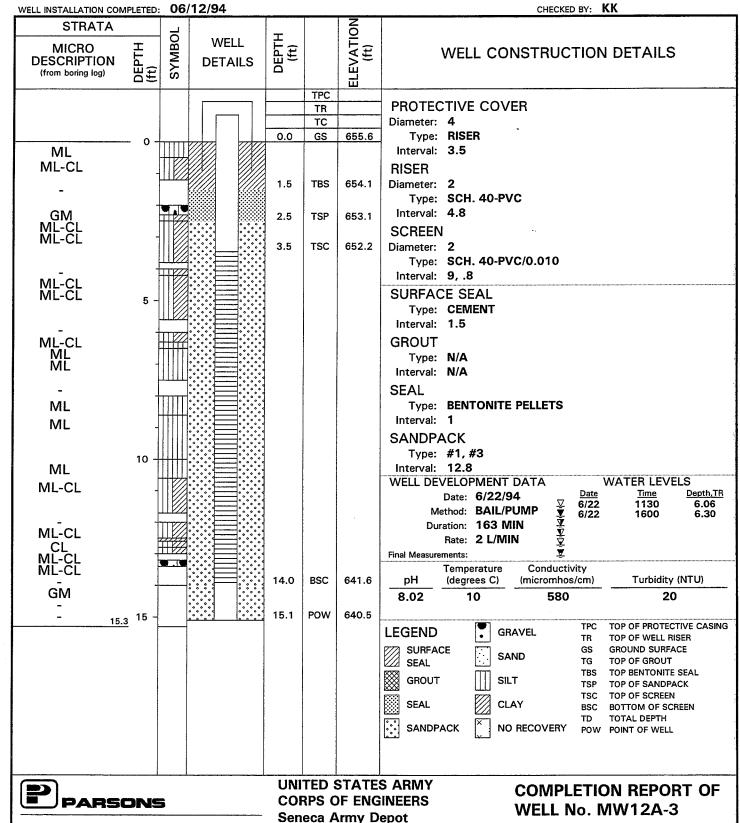
WELL LOCATION (N/E): 1015521.5 744532.2

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 655.6

**DATUM: NAD 1983** 

GEOLOGIST: F. O'LOUGHLIN



#### COMPLETION REPORT OF WELL No. MW12B-1

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 06/13/94

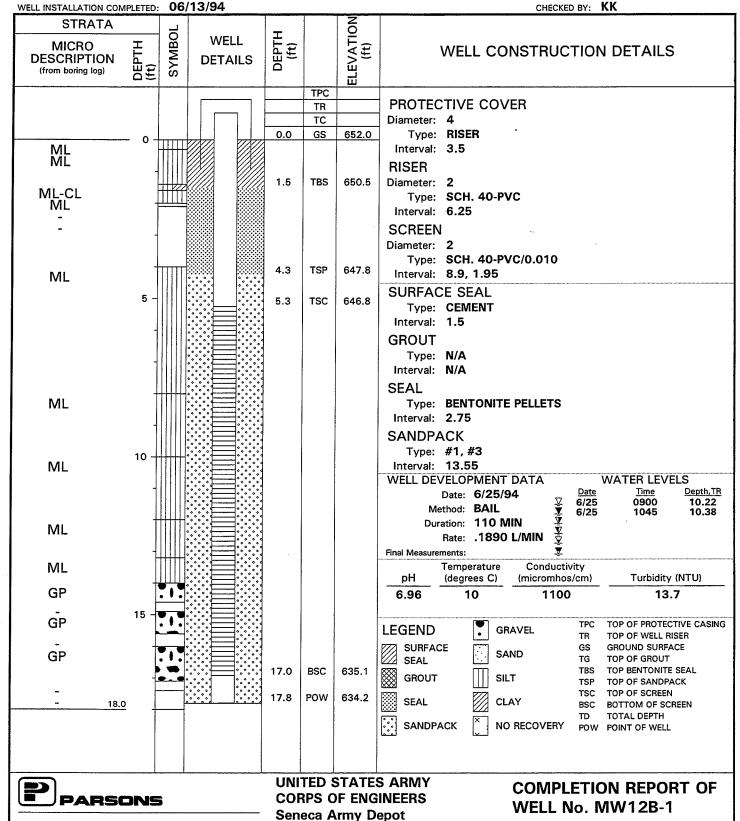
**ENGINEERING-SCIENCE, INC.** 

WELL LOCATION (N/E): 1015934.0 743739.7

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 652.0

DATUM: NAD 1983
GEOLOGIST: F. O'LOUGHLIN



#### COMPLETION REPORT OF WELL No. MW12B-2

**ENGINEERING-SCIENCE, INC.** 

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCs

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 06/12/94

WELL LOCATION (N/E): 1015919.8 743522.9

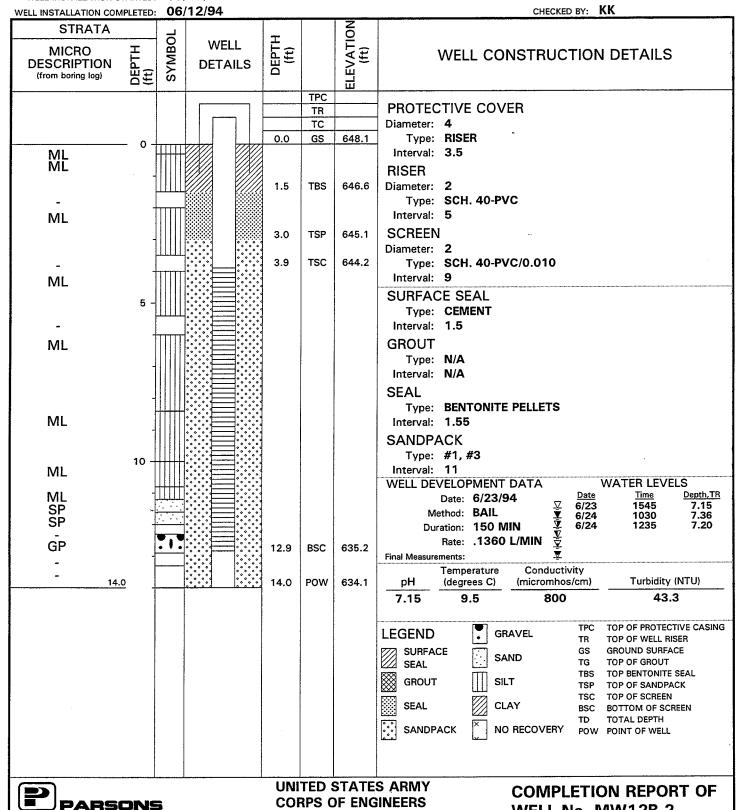
REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 648.1

**DATUM: NAD 1983** GEOLOGIST: F. O'LOUGHLIN

WELL No. MW12B-2

Sheet 1 of 1



Seneca Army Depot

#### COMPLETION REPORT OF WELL No. MW12B-3

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCS PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

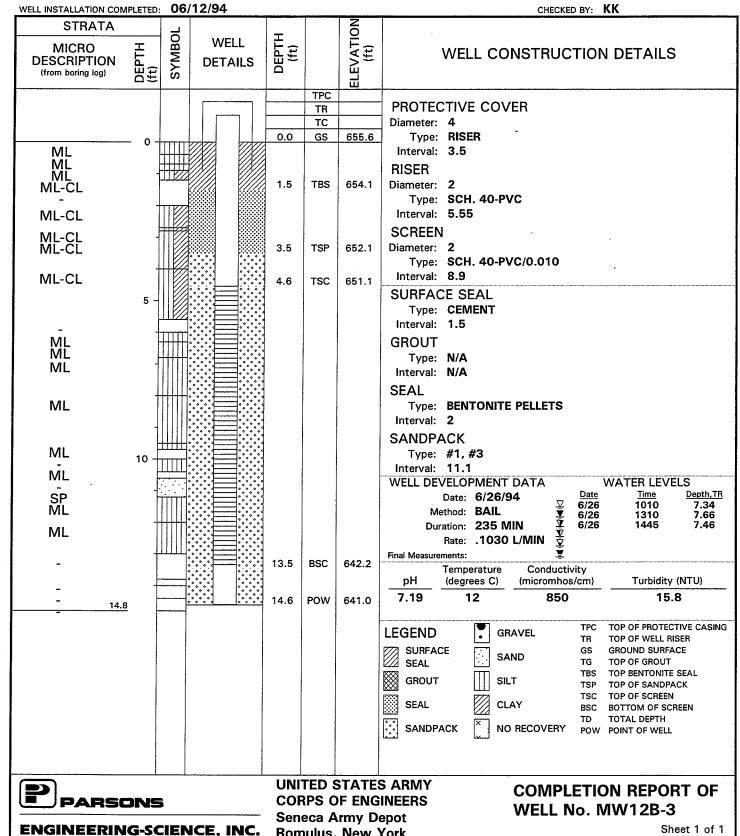
WELL INSTALLATION STARTED: 06/12/94

WELL LOCATION (N/E): 1015995.8 743517.1

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 655.6

**DATUM: NAD 1983** GEOLOGIST: F. O'LOUGHLIN



#### **TEMPORARY WELL COMPLETION REPORT: MW12-3**

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 11/6/97 WELL INSTALLATION COMPLETED 11/6/97

DRILLING CONTRACTOR: Maxim DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon

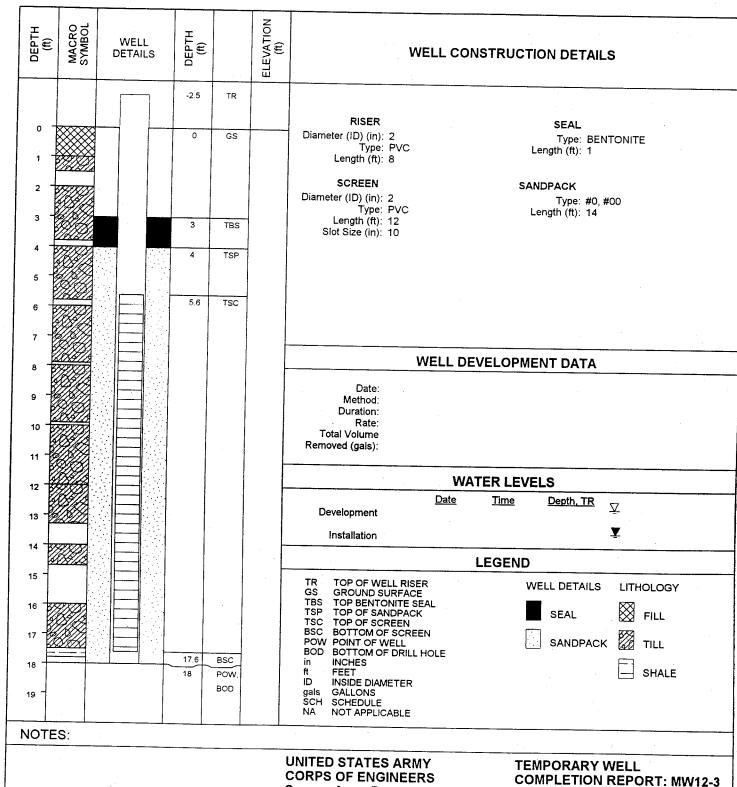
**TOTAL DEPTH: 18** DEPTH TO WATER: BORING LOCATION:

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: EAF CHECKED BY:



Seneca Army Depot Romulus, New York

PAGE 1 OF 2 OVERBURDEN MONITORING WELL **COMPLETION REPORT & INSTALLATION DETAIL** PROTECTIVE RISER COMPLETION Parsons ES Inc. CLIENT: Senera Army Depit WELL #: MW12-4 Sead-12 NI/FS PROJECT NO: 730047 - 01001 INSPECTOR: FAF CHECKED BY: DRILLING CONTRACTOR: POW DEPTH: /2.4 ( BGs) Maxim Tech INSTALLATION STARTED: 11/5/97 DRILLER: John Warner 11/4/97 INSTALLATION COMPLETED: 11/5/97 DRILLING COMPLETED: 12.4 (BGS) BORING DEPTH: SURFACE COMPLETION DATE: 11/7/99 444 HSA COMPLETION CONTRACTOR/CREW: Maxim Tech DRILLING METHOD(S): BORING DIAMETER(S): BEDROCK CONFIRMED (Y/N?) ASSOCIATED SWMU/AOC: ESTIMATED GROUND ELEVATION: Sead-12 PROTECTIVE SURFACE CASING: DIAMETER: LENGTH: RISER: TR: -2,5 TYPE: Sih Yl pu DIAMETER: LENGTH: SCREEN: SLOT TSC: 4,77 TYPE: Sch 40 PUC LENGTH: 7,21 SIZE: O.OIO POINT OF WELL: (SILT SUMP) TYPE: Sumo POW: 12,2 GROUT: None TG: TYPE: LENGTH: SEAL: TYPE: Bentenite chip LENGTH: mne # 00 SAND PACK: TSP: TYPE: LENGTH: SURFACE COLLAR: TYPE: Concrete RADIUS: THICKNESS EDGE: 4 THICKNESS CENTER: CENTRALIZER DEPTHS None DEPTH 1: DEPTH 2: DEPTH 3:

\*ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

COMMENTS:

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/28/98 WELL INSTALLATION COMPLETED 10/28/98

DRILLING CONTRACTOR: Maxim DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 13.6 DEPTH TO WATER:

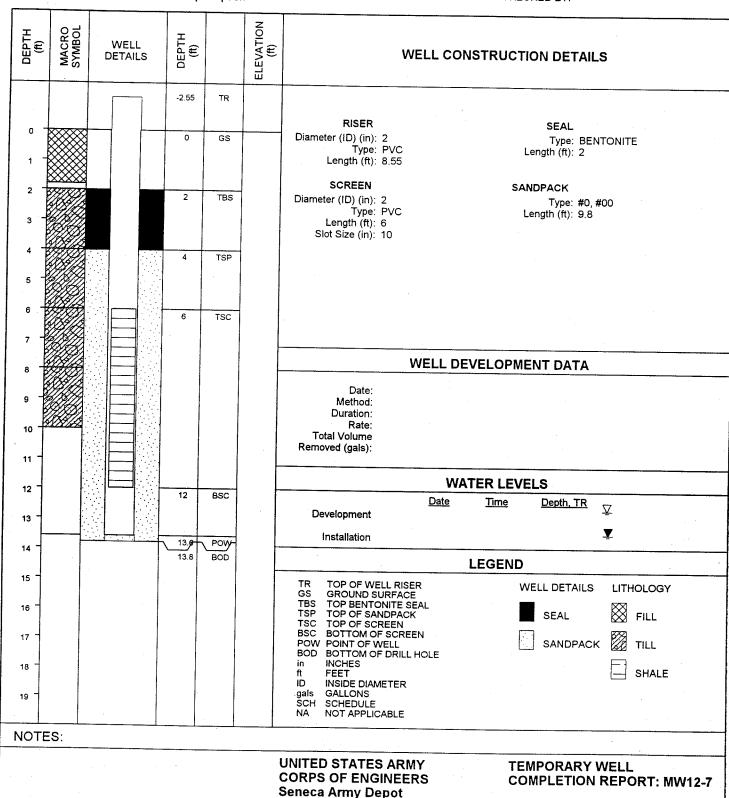
BORING LOCATION:

COORDINATE SYSTEM: NAD83

**GROUND SURFACE ELEVATION:** 

**ELEVATION DATUM: NAVD1927** INSPECTOR: TGH

CHECKED BY:



PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047 WELL INSTALLATION STARTED: 10/28/98

WELL INSTALLATION COMPLETED 11/2/98 DRILLING CONTRACTOR: Maxim DRILLING METHOD: HSA 8"

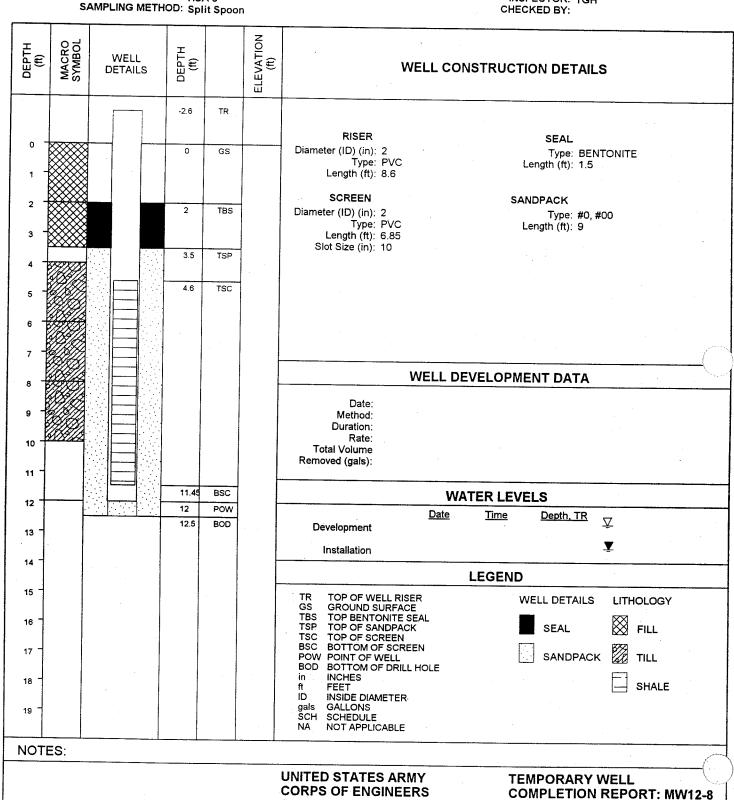
**TOTAL DEPTH: 12** DEPTH TO WATER: **BORING LOCATION:** 

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

**ELEVATION DATUM: NAVD1927** INSPECTOR: TGH

CHECKED BY:



PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12 PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/17/98 WELL INSTALLATION COMPLETED 10/17/98 DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon TOTAL DEPTH: 14.1

DEPTH TO WATER: BORING LOCATION:

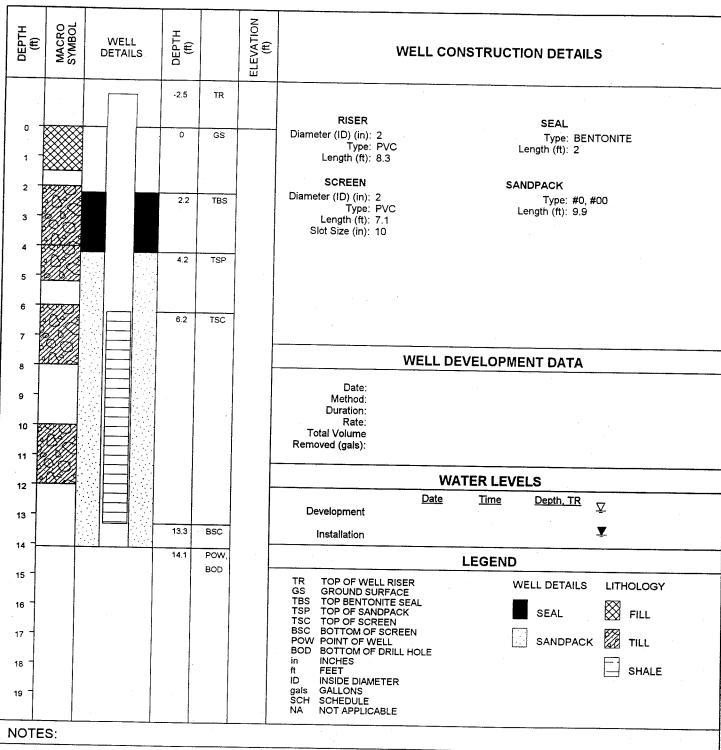
COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION: **ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR CHECKED BY:

**TEMPORARY WELL** 

**COMPLETION REPORT: MW12-9** 



UNITED STATES ARMY

**CORPS OF ENGINEERS** 

PROJECT: SEDA

JECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 9/29/98
WELL INSTALLATION COMPLETED 9/30/98
DRILLING CONTRACTOR: Maxim
DRILLING METHOD: HSA 8"

TOTAL DEPTH: 17.1 DEPTH TO WATER: BORING LOCATION:

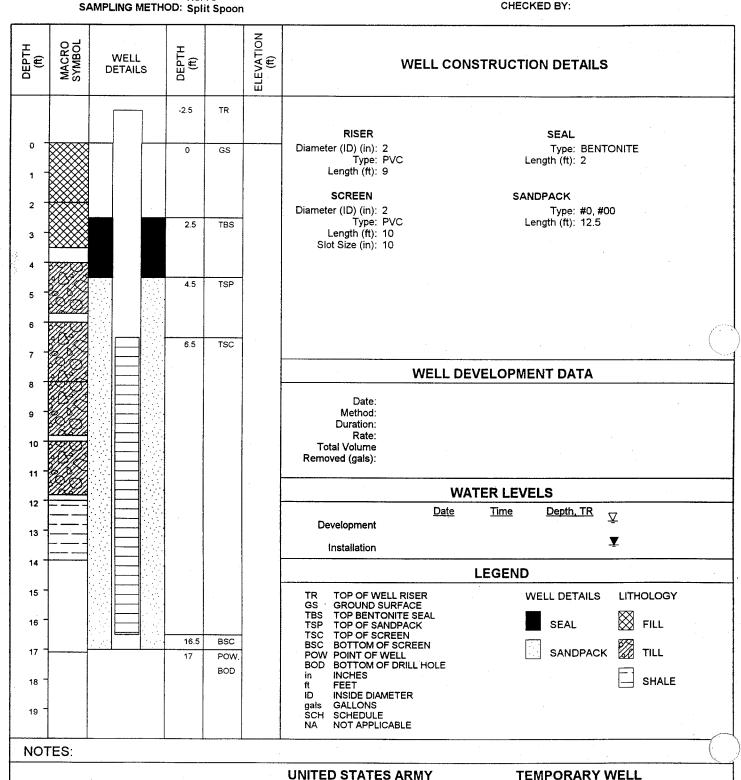
COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

ELEVATION DATUM: NAVD1927

INSPECTOR: ITR CHECKED BY:

**COMPLETION REPORT: MW12-10** 



**CORPS OF ENGINEERS** 

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047
WELL INSTALLATION STARTED: 10/29/98 WELL INSTALLATION COMPLETED 10/29/98

DRILLING CONTRACTOR: Maxim DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon

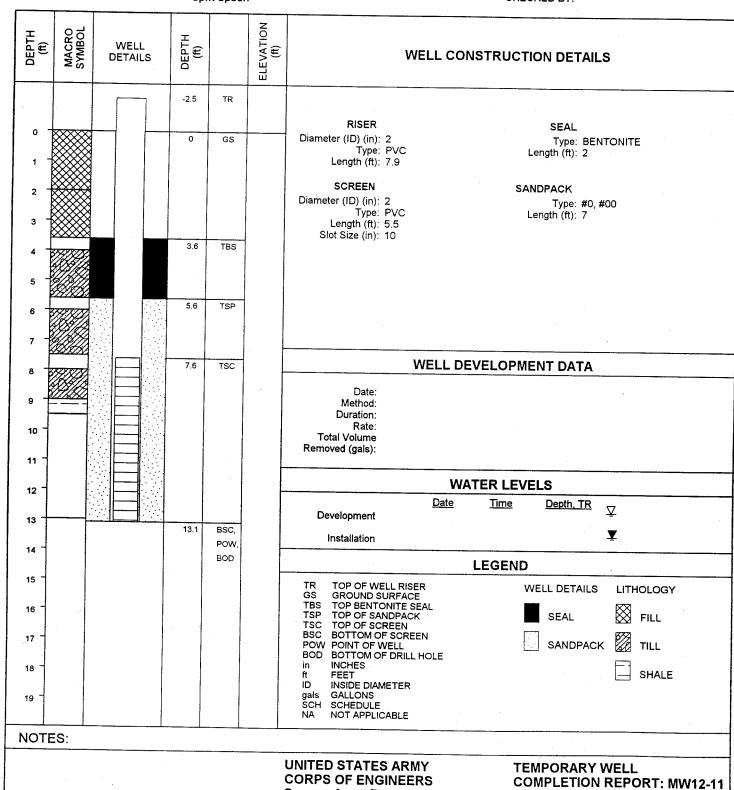
TOTAL DEPTH: 13 DEPTH TO WATER: **BORING LOCATION:** 

COORDINATE SYSTEM: NAD83

**GROUND SURFACE ELEVATION:** 

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR CHECKED BY:



PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/6/98 WELL INSTALLATION COMPLETED 10/6/98

DRILLING CONTRACTOR: Maxim DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon

**TOTAL DEPTH: 13** DEPTH TO WATER: BORING LOCATION:

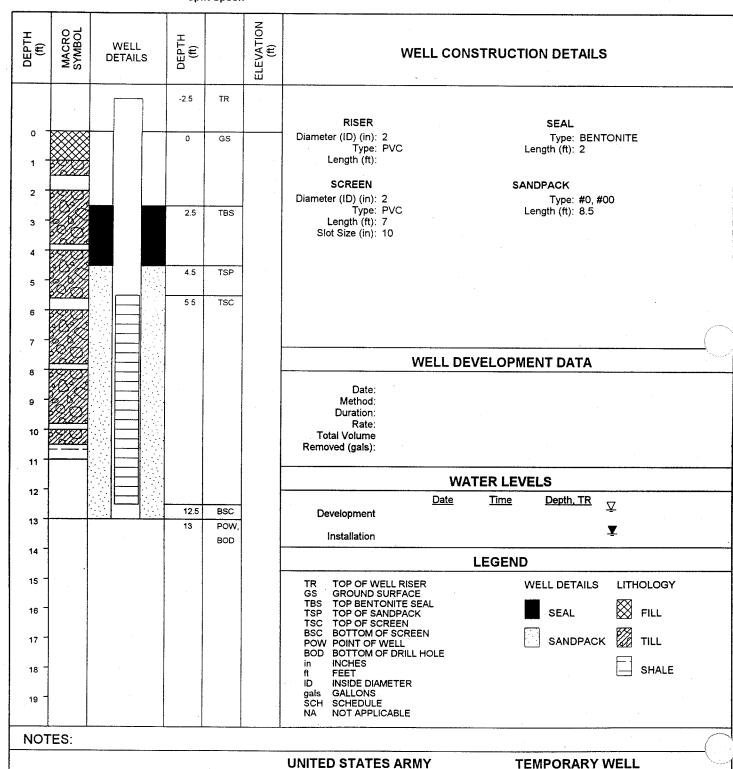
COORDINATE SYSTEM: NAD83

**GROUND SURFACE ELEVATION:** 

**ELEVATION DATUM: NAVD1927** 

**COMPLETION REPORT: MW12-12** 

INSPECTOR: ITR CHECKED BY:



**CORPS OF ENGINEERS** 

PROJECT: SEDA

PROJECT: SEDA
PROJECT LOCATION: Seneca Army Depot, Romulus, New York
ASSOCIATED AREA/UNIT: SEAD 12
PROJECT NO.: 730047
WELL INSTALLATION STARTED: 10/1/98
WELL INSTALLATION COMPLETED 10/1/98
DRILLING CONTRACTOR: 10/1/98

DRILLING CONTRACTOR: Maxim
DRILLING METHOD: HSA 8"
SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 13 DEPTH TO WATER: BORING LOCATION:

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR CHECKED BY:

|                         | -: 2.110 M2 111 |               | nt Spoon | ł.                |                                                               | CHE         | CKED BY:                            |        |
|-------------------------|-----------------|---------------|----------|-------------------|---------------------------------------------------------------|-------------|-------------------------------------|--------|
| DEPTH (ft) MACRO SYMBOL | WELL<br>DETAILS | DEPTH<br>(ft) |          | ELEVATION<br>(ft) | WELL CO                                                       | NSTRUCT     | ION DETAILS                         |        |
|                         |                 | -2.8          | TR       |                   |                                                               |             |                                     |        |
|                         |                 |               |          |                   | RISER                                                         |             | SEAL                                |        |
| °                       |                 | 0             | GS       |                   | Diameter (ID) (in): 2                                         |             | Type: BENTONITE                     |        |
| 1                       |                 |               |          |                   | Type: PVC<br>Length (ft): 10.3                                |             | Length (ft): 2                      |        |
| 2 800000                |                 |               |          |                   | SCREEN                                                        |             | NDPACK                              |        |
|                         |                 | 2             | TBS      |                   | Diameter (ID) (in): 2<br>Type: PVC                            |             | Type: #0, #00                       |        |
| 3 - 4                   |                 |               |          |                   | Length (ft): 7.5                                              | I           | _ength (ft): 9                      |        |
| 4 88900                 |                 |               |          |                   | Slot Size (in): 10                                            |             |                                     |        |
|                         |                 | 4             | TSP      |                   |                                                               |             |                                     |        |
| 5 7                     |                 |               |          |                   |                                                               |             |                                     |        |
| 6                       |                 | 5.5           | TSC      |                   |                                                               |             |                                     |        |
| 7 - 11/11/1             |                 |               |          |                   |                                                               |             |                                     |        |
|                         |                 |               |          | -                 | WELLD                                                         | EVEL ORM    |                                     |        |
| 8                       |                 |               |          | F                 | WELL DI                                                       | EVELOPM     | ENIDAIA                             |        |
| 9 2/1/2/2               |                 |               |          |                   | Date:<br>Method:                                              |             |                                     |        |
| ===                     |                 |               |          |                   | Duration:<br>Rate:                                            |             |                                     |        |
| 10 7                    |                 |               |          |                   | Total Volume<br>Removed (gals):                               |             |                                     |        |
| 11                      |                 |               |          |                   | (gaio).                                                       |             |                                     |        |
| 12                      |                 |               |          | L                 | WA                                                            | ATER LEVI   | ELS                                 |        |
| 40                      |                 |               |          |                   | <u>Date</u><br>Development                                    | <u>Time</u> | Depth, TR                           |        |
| 13                      |                 | 13            | POW,     |                   | Installation                                                  |             | <b>T</b> .                          |        |
| 14                      |                 |               | BOD      | -                 | modulatori                                                    |             |                                     |        |
| 15                      |                 |               |          | F                 | TO TOO 1                                                      | LEGEND      |                                     |        |
|                         |                 |               |          |                   | TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL | <u>v</u>    | VELL DETAILS LITHOLOGY              |        |
| 16                      |                 |               |          |                   | TSP TOP OF SANDPACK TSC TOP OF SCREEN                         |             | SEAL FILL                           |        |
| 17                      |                 |               |          |                   | BSC BOTTOM OF SCREEN POW POINT OF WELL                        |             | SANDPACK TILL                       | ł      |
| 18                      |                 |               |          | .                 | BOD BOTTOM OF DRILL HOLE in INCHES                            |             |                                     |        |
| · <del>-</del>          |                 |               |          |                   | ft FEET<br>ID INSIDE DIAMETER                                 |             | SHALE                               |        |
| 19                      |                 |               |          |                   | gals GALLONS<br>SCH SCHEDULE                                  |             |                                     | .      |
| NOTEC                   |                 |               |          |                   | NA NOT APPLICABLE                                             |             |                                     |        |
| NOTES:                  |                 |               |          |                   |                                                               |             |                                     | 7      |
|                         |                 |               |          | (                 | JNITED STATES ARMY<br>CORPS OF ENGINEERS<br>Seneca Army Depot | CO          | MPORARY WELL<br>MPLETION REPORT: MV | W12-13 |
|                         |                 |               |          | 1                 | Romulus, New York                                             |             |                                     |        |

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/15/98
WELL INSTALLATION COMPLETED 10/21/98

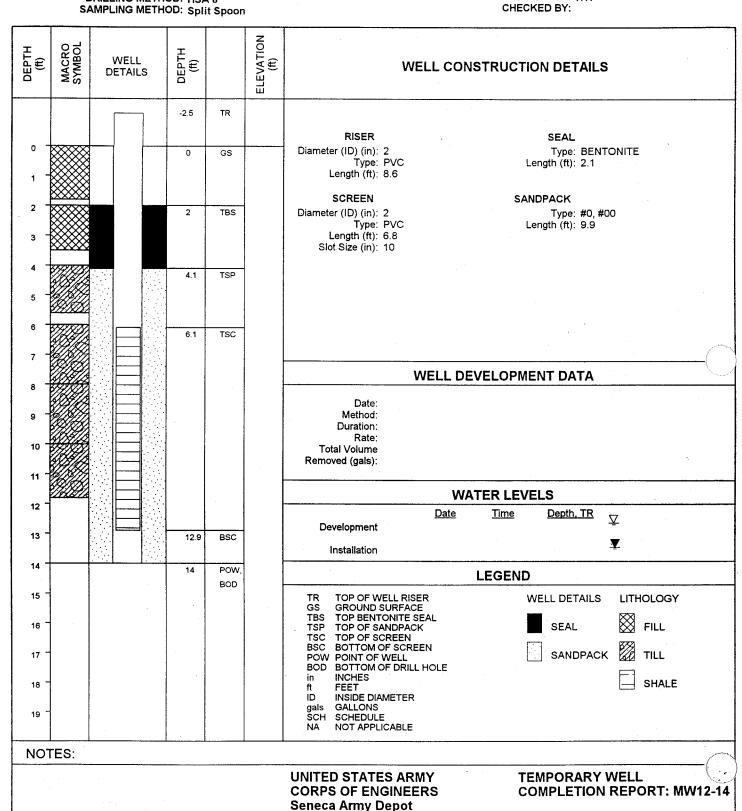
DRILLING CONTRACTOR: Maxim
DRILLING METHOD: HSA 8"

TOTAL DEPTH: 14
DEPTH TO WATER:
BORING LOCATION:

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

ELEVATION DATUM: NAVD1927 INSPECTOR: ITR CHECKED BY:



Romulus, New York

# OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

| Parsons ES Inc. CLIENT:                                 | enera Henry Depot WELL #: MW12-15                           |
|---------------------------------------------------------|-------------------------------------------------------------|
| PROJECT: Senew Sead-12 RIJFS                            | PROJECT NO: 730097 -01001                                   |
| LOCATION: North of disposed pit X                       | $\frac{75009 + -67061}{10000000000000000000000000000000000$ |
| J. J. C.                                                | CHECKED BY: DRG                                             |
| DRILLING CONTRACTOR: Maxim Tell                         |                                                             |
|                                                         | POW DEPTH: 13.1                                             |
| - TOOTICY DUST                                          | INSTALLATION STARTED: 10/1/98                               |
| DRILLING COMPLETED: 10/1/98                             | INSTALLATION COMPLETED: _/0/1/98                            |
| BORING DEPTH: 13.1 (BCs)                                | SURFACE COMPLETION DATE: 10/5/98                            |
| DRILLING METHOD(S): 4 1/4 HSA  BORING DIAMETER(S): 8"   | COMPLETION CONTRACTOR/CREW: Maxim                           |
|                                                         | BEDROCK CONFIRMED (Y/N?)                                    |
| ASSOCIATED SWMU/AOC: SEAD - 12_                         | ESTIMATED GROUND ELEVATION:                                 |
| PROTECTIVE SURFACE CASING:                              |                                                             |
| DIAMETER:                                               | LENGTH: 5'                                                  |
| RISER:                                                  |                                                             |
| TR: 2.6' TYPE: PK 51440                                 | DIAMETER: 2 LENGTH: /0                                      |
| SCREEN:                                                 | SLOT                                                        |
| TSC: 5.4 (BLG) TYPE: Sch.40 px                          | DIAMETER: 2" LENGTH: 7.2' SIZE: 0.010"                      |
| POINT OF WELL: (SILT SUMP)                              |                                                             |
| <b>TYPE:</b> <u>5υπρ</u> <b>BSC:</b> <u>12.6 (β(x5)</u> | POW: 13.1 (BCES)                                            |
| GROUT: None 1.91 (Bas) Gel) TG: Salace (0.0 Bas) TYPE:  |                                                             |
| SEAL: TBS: 1,9 BGS TYPE:                                | Bentanite chy? LENGTH: 21                                   |
|                                                         | morie de LENGTH: 8.7'                                       |
| SURFACE COLLAR:                                         |                                                             |
| TYPE: Convete / Binton, & RADIUS: 2                     | THICKNESS CENTER: / THICKNESS EDGE: 4"                      |
| CENTRALIZER DEPTHS None.                                |                                                             |
| DEPTH 1: DEPTH 2:                                       | DEPTH 3: DEPTH 4:                                           |
| COMMENTS:                                               |                                                             |
| SOMME(175)                                              |                                                             |
|                                                         |                                                             |
|                                                         |                                                             |
|                                                         |                                                             |
|                                                         | 1                                                           |
| ALL DEDOLLAGE                                           | UREMENTS REFERENCED TO GROUND SURFACE                       |

PAGE 1 OF 2

#### **TEMPORARY WELL COMPLETION REPORT: MW12-16**

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12 PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/17/98
WELL INSTALLATION COMPLETED 10/17/98

DRILLING CONTRACTOR: Maxim
DRILLING METHOD: HSA 8"
SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 14.2 DEPTH TO WATER:

COORDINATE SYSTEM: NAD83

BORING LOCATION:

GROUND SURFACE ELEVATION:

**ELEVATION DATUM: NAVD1927** 

**TEMPORARY WELL** 

**COMPLETION REPORT: MW12-16** 

INSPECTOR: ITR CHECKED BY:

ELEVATION (ft) MACRO SYMBOL DEPTH (ft) DEPTH (ft) WELL WELL CONSTRUCTION DETAILS **DETAILS** -2 45 TR RISER SEAL 0 0 GS Diameter (ID) (in): 2 Type: BENTONITE Type: PVC Length (ft): 2 Length (ft): 8.85 SCREEN SANDPACK Diameter (ID) (in): 2 Type: #0, #00 2.4 TRS Type: PVC Length (ft): 9.8 Length (ft): 7 Slot Size (in): 10 4.4 TSP TSC WELL DEVELOPMENT DATA Date: Method: Duration: Rate: 10 Total Volume Removed (gals): 11 WATER LEVELS 12 **Date** Time Depth, TR  $\nabla$ Development 13 ¥ Installation 13.4 BSC 14 14.2 POW **LEGEND** BOD 15 TOP OF WELL RISER WELL DETAILS LITHOLOGY GROUND SURFACE TOP BENTONITE SEAL TOP OF SANDPACK GS TBS 16 SEAL TSP TOP OF SCREEN TSC BSC BOTTOM OF SCREEN SANDPACK TILL 17 POW POINT OF WELL
BOD BOTTOM OF DRILL HOLE
IN INCHES 18 SHALE FEET INSIDE DIAMETER GALLONS 19 SCH SCHEDULE NOT APPLICABLE NOTES:

**UNITED STATES ARMY** 

**CORPS OF ENGINEERS** 

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12 PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/17/98
WELL INSTALLATION COMPLETED 10/17/98
DRILLING CONTRACTOR: Maxim

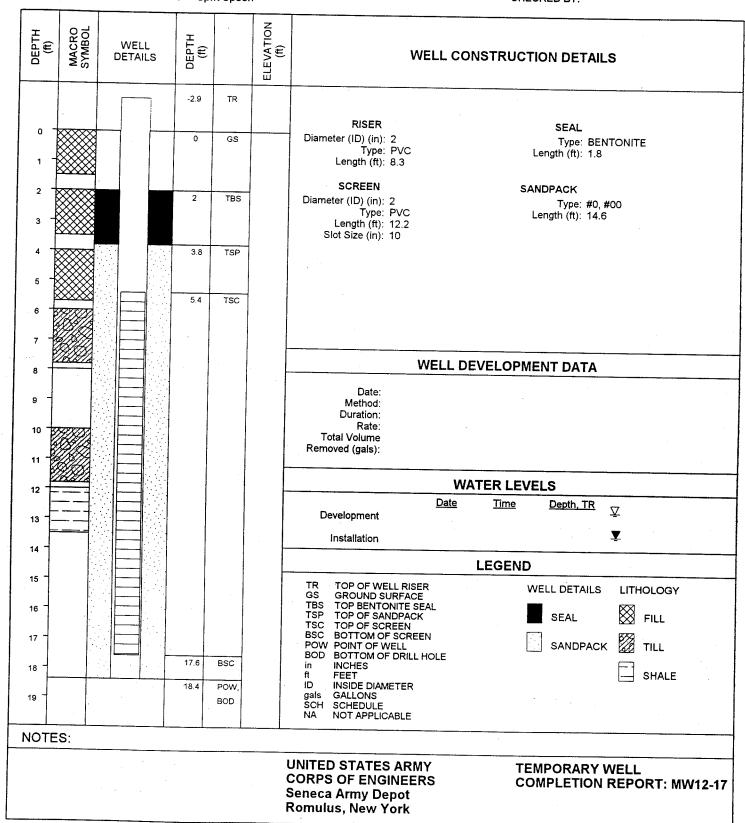
DRILLING METHOD: HSA 8"
SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 18.4
DEPTH TO WATER:
BORING LOCATION:

COORDINATE SYSTEM: NAD83

**GROUND SURFACE ELEVATION:** 

ELEVATION DATUM: NAVD1927 INSPECTOR: ITR



PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/2/98 WELL INSTALLATION COMPLETED 10/2/98 DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 14.5 DEPTH TO WATER: BORING LOCATION:

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR CHECKED BY:

| DEPTH (ft)      | MACRO | WELL<br>DETAILS | DEPTH (ft)   |             | ELEVATION<br>(ft) | WELL CONS                                                                                | STRUCTION DETAILS                    |       |
|-----------------|-------|-----------------|--------------|-------------|-------------------|------------------------------------------------------------------------------------------|--------------------------------------|-------|
|                 |       |                 | -2.5         | TR          |                   |                                                                                          |                                      |       |
| 0 -             |       |                 |              |             |                   | RISER                                                                                    | SEAL                                 |       |
| 1 -             |       |                 | 0            | GS          |                   | Diameter (ID) (in): 2<br>Type: PVC<br>Length (ft): 8.5                                   | Type: BENTONITE<br>Length (ft): 2    |       |
| 2               | ****  |                 |              |             |                   | SCREEN                                                                                   | SANDPACK                             |       |
| 3 -             |       |                 | 2.5          | TBS         |                   | Diameter (ID) (in): 2<br>Type: PVC<br>Length (ft): 7.3<br>Slot Size (in): 10             | Type: #0, #00<br>Length (ft): 10     |       |
| 5               |       |                 | 4.5          | TSP         |                   |                                                                                          |                                      |       |
| 6               |       |                 | 6            | 700         |                   |                                                                                          |                                      |       |
| 7 -             |       |                 |              | TSC         |                   |                                                                                          |                                      | (     |
|                 |       |                 |              |             |                   | WELL DEV                                                                                 | /ELOPMENT DATA                       |       |
| 9 -             |       |                 |              |             |                   | Date:<br>Method:<br>Duration:<br>Rate:<br>Total Volume<br>Removed (gals):                |                                      |       |
|                 |       |                 |              | -           |                   | WAT                                                                                      | FER LEVELS                           |       |
| 12              |       |                 |              |             |                   | <u>Date</u><br>Development                                                               | Time Depth, TR <sub>∑</sub>          | ···   |
| 13              |       |                 | 13.3         | BSC         |                   | Installation                                                                             | Ţ                                    |       |
| 14 -            |       |                 |              |             |                   |                                                                                          | LEGEND                               |       |
| 15              |       |                 | 14.5         | POW,<br>BOD |                   | TR TOP OF WELL RISER                                                                     | WELL DETAILS LITHOLOGY               |       |
| 16              |       |                 |              |             |                   | GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK                             | SEAL FILL                            |       |
| 17 -            |       |                 |              |             |                   | TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL                                 | SANDPACK TILL                        |       |
| 18 <sup>-</sup> |       |                 |              |             |                   | BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS. SCH SCHEDULE | SHALE                                |       |
|                 |       |                 |              |             |                   | NA NOT APPLICABLE                                                                        |                                      |       |
| NOT             | TES:  |                 | <del> </del> |             | - 4               |                                                                                          |                                      | _(``` |
|                 |       |                 |              |             |                   | UNITED STATES ARMY CORPS OF ENGINEERS                                                    | TEMPORARY WELL COMPLETION REPORT: MW | 12-18 |

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/3/98 WELL INSTALLATION COMPLETED 10/3/98

DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon

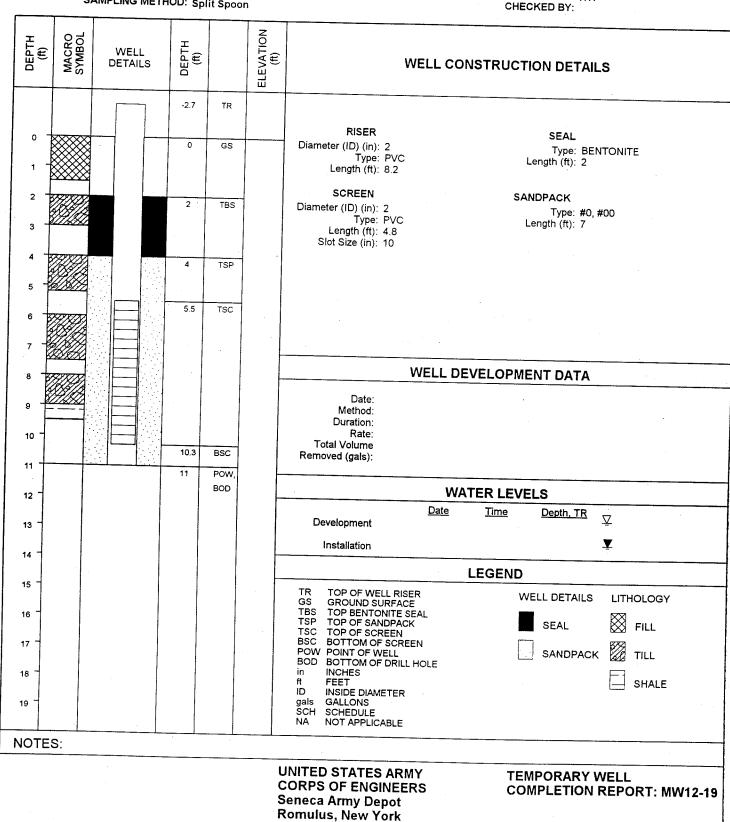
TOTAL DEPTH: 11 DEPTH TO WATER: BORING LOCATION:

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR



PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/3/98
WELL INSTALLATION COMPLETED 10/3/98

DRILLING CONTRACTOR: Maxim
DRILLING METHOD: HSA 8"
SAMPLING METHOD: Split Spoon

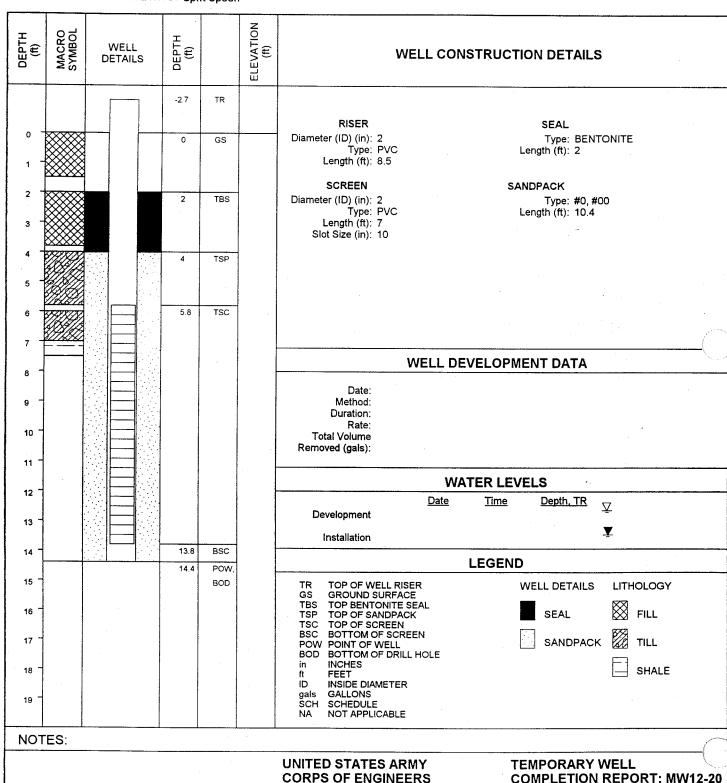
TOTAL DEPTH: 14.4 DEPTH TO WATER: BORING LOCATION:

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR



PROJECT: SEDA
PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047 WELL INSTALLATION STARTED: 10/3/98 WELL INSTALLATION COMPLETED 10/3/98 DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 11.2 DEPTH TO WATER:

BORING LOCATION:

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

ELEVATION DATUM: NAVD1927

INSPECTOR: ITR CHECKED BY:

| DEPTH (ft) | MACRO | WELL<br>DETAILS | DEPTH<br>(ft) |             | ELEVATION (ft) | WELL CONSTRUCTION DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |
|------------|-------|-----------------|---------------|-------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
|            |       |                 | -2.9          | TR          |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                    |
| 0          |       |                 |               |             |                | RISER SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                    |
| 1          |       |                 | 0             | GS          |                | Diameter (ID) (in): 2 Type: BENTONITE Type: PVC Length (ft): 8.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                    |
| 2          | XXXX  |                 | 2             | TBS         |                | SCREEN SANDPACK Diameter (ID) (in): 2 Type: #0, #00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                    |
| 3          |       |                 |               |             |                | Diameter (ID) (in): 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                    |
| 4          |       |                 | 4             | TSP         |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                    |
| 5 -        |       |                 |               |             |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                    |
| 6 -        |       |                 | 5.6           | TSC         |                | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                    |
| 7 -        |       |                 |               |             |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                    |
| 8 -        |       |                 |               |             | .              | WELL DEVELOPMENT DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                    |
| .9 -       |       |                 |               |             |                | Date:<br>Method:<br>Duration:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |
| 10 -       |       |                 | 10.35         | BSC         |                | Rate: Total Volume Removed (gals):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |
| 12         |       |                 | 11.2          | POW,<br>BOD |                | WATER LEVELS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                    |
|            |       |                 |               |             |                | <u>Date</u> <u>Time</u> <u>Depth, TR</u> <u>▽</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                    |
| 13 7       |       |                 |               |             |                | Installation ¥                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                    |
| 14         |       |                 |               |             | ľ              | LEGEND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                    |
| 15 ~       |       | -               |               |             |                | TP TOP OF WELL PIOED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DLOGY                              |
| 16         |       |                 |               |             |                | TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | FILL                               |
| 17         |       |                 |               | .  -        |                | BSC BOTTOM OF SCREEN POW POINT OF WELL SANDPACK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | rill.                              |
| 18         |       |                 |               |             |                | BOD BOTTOM OF DRILL HOLE in INCHES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SHALE                              |
| 19         |       |                 |               |             |                | ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ( 17 M <sub>2</sub> L <sub>2</sub> |
| NOT        | ES:   |                 |               |             |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | · ·                                |
|            |       |                 |               |             | :              | UNITED STATES ARMY TEMPORARY WELL CORPS OF ENGINEERS COMPLETION REPORMENTATION OF THE POPULATION OF TH | RT: MW12-21                        |

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12 PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/4/98
WELL INSTALLATION COMPLETED 10/4/98 DRILLING CONTRACTOR: Maxim DRILLING METHOD: HSA 8"

SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 12.6 DEPTH TO WATER: BORING LOCATION:

COORDINATE SYSTEM: NAD83

**GROUND SURFACE ELEVATION:** 

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR CHECKED BY:

| DEPTH<br>(ft) | MACRO<br>SYMBOL | WELL<br>DETAILS                       | DEPTH<br>(ff) |      | ELEVATION<br>(ft) | WELL CONST                                                                | TRUCTION DETAILS                          |
|---------------|-----------------|---------------------------------------|---------------|------|-------------------|---------------------------------------------------------------------------|-------------------------------------------|
|               |                 |                                       | -2.9          | TR   |                   |                                                                           |                                           |
|               |                 |                                       |               |      |                   | RISER                                                                     | SEAL                                      |
| 0 -           |                 |                                       | 0             | GS   |                   | Diameter (ID) (in): 2<br>Type: PVC                                        | Type: BENTONITE<br>Length (ft): 1.5       |
| 1             | $\bowtie$       |                                       |               |      |                   | Length (ft): 7.3                                                          | Lengur (II). 1.3                          |
|               | $\bowtie$       |                                       | 1.7           | TBS  |                   | SCREEN                                                                    | SANDPACK                                  |
| 2             |                 |                                       |               | 1.50 |                   | Diameter (ID) (in): 2<br>Type: PVC                                        | Type: #0, #00<br>Length (ft): 9.4         |
| 3 -           |                 |                                       |               |      |                   | Length (ft): 6.7                                                          | Length (tt). 9.4                          |
|               | *****           |                                       | 3.2           | TSP  |                   | Slot Size (in): 10                                                        |                                           |
| 4             |                 |                                       | 4.4           | TSC  |                   |                                                                           |                                           |
| 5             |                 |                                       |               |      |                   |                                                                           |                                           |
| 6 7           |                 |                                       |               |      |                   |                                                                           |                                           |
|               |                 |                                       |               |      |                   |                                                                           |                                           |
| 7 -           |                 |                                       |               |      |                   |                                                                           |                                           |
| 8             |                 |                                       |               |      |                   | WELL DEVE                                                                 | ELOPMENT DATA                             |
| 9 -           |                 |                                       |               |      |                   | Date:<br>Method:<br>Duration:<br>Rate:<br>Total Volume<br>Removed (gals): |                                           |
| 11 -          |                 |                                       | 11.1          | BSC  |                   |                                                                           | ER LEVELS                                 |
| 12            |                 |                                       |               |      | ļ                 | <u>Date</u>                                                               | Time Depth, TR                            |
| 13            |                 | · · · · · · · · · · · · · · · · · · · | 12.6          | POW, |                   | Development                                                               | <u>~</u>                                  |
|               |                 |                                       |               | BOD  |                   | Installation                                                              | Ţ                                         |
| 14            |                 |                                       |               |      |                   | · LI                                                                      | EGEND                                     |
| 15            |                 |                                       |               |      | Ī                 | TR TOP OF WELL RISER                                                      | WELL DETAILS LITHOLOGY                    |
| 16 -          | :               |                                       |               |      |                   | GS GROUND SURFACE TBS TOP BENTONITE SEAL                                  | SEAL FILL                                 |
| ,             |                 |                                       |               |      |                   | TSP TOP OF SANDPACK TSC TOP OF SCREEN                                     |                                           |
| 17            |                 |                                       |               |      |                   | BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE           | SANDPACK TILL                             |
| 18            | ·               |                                       |               |      |                   | in INCHES ft FEET                                                         | SHALE                                     |
| 19            |                 |                                       |               |      |                   | ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE            |                                           |
| NOT           | EQ.             |                                       | Ll            |      | l                 |                                                                           |                                           |
| 1101          | LU.             |                                       | ···           |      |                   | LIMITED STATES ADMY                                                       | TEMPODADYWELL                             |
|               |                 |                                       |               |      |                   | UNITED STATES ARMY<br>CORPS OF ENGINEERS                                  | TEMPORARY WELL COMPLETION REPORT: MW12-22 |

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12 PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/5/98
WELL INSTALLATION COMPLETED 10/5/98
DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8"
SAMPLING METHOD: Split Spoon

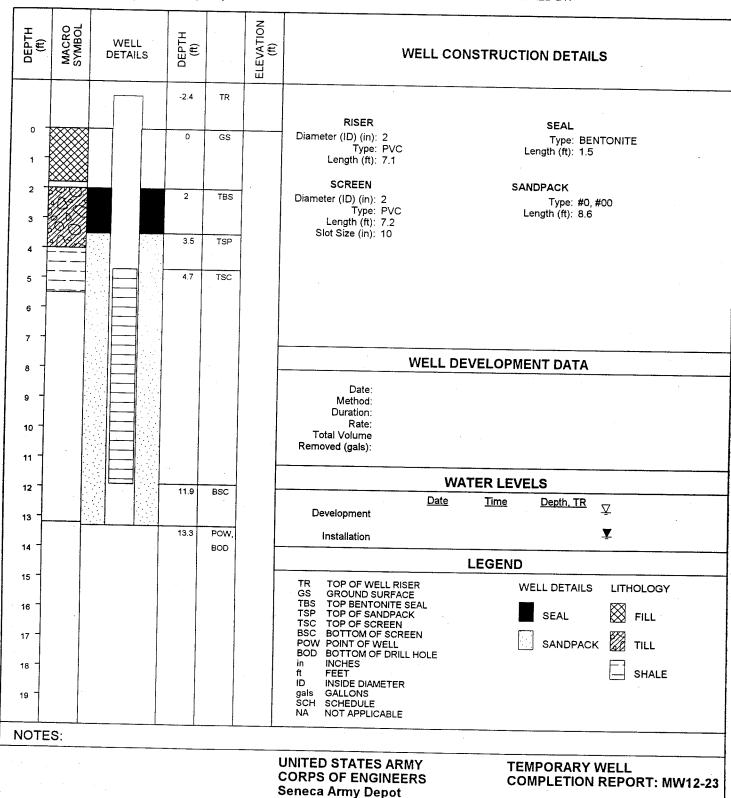
TOTAL DEPTH: 13.3 DEPTH TO WATER:

BORING LOCATION:

COORDINATE SYSTEM: NAD83 GROUND SURFACE ELEVATION:

ELEVATION DATUM: NAVD1927

INSPECTOR: ITR CHECKED BY:



Romulus, New York

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12 PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/19/98
WELL INSTALLATION COMPLETED 10/19/98

DRILLING CONTRACTOR: Maxim
DRILLING METHOD: HSA 8"
SAMPLING METHOD: Split Spoon

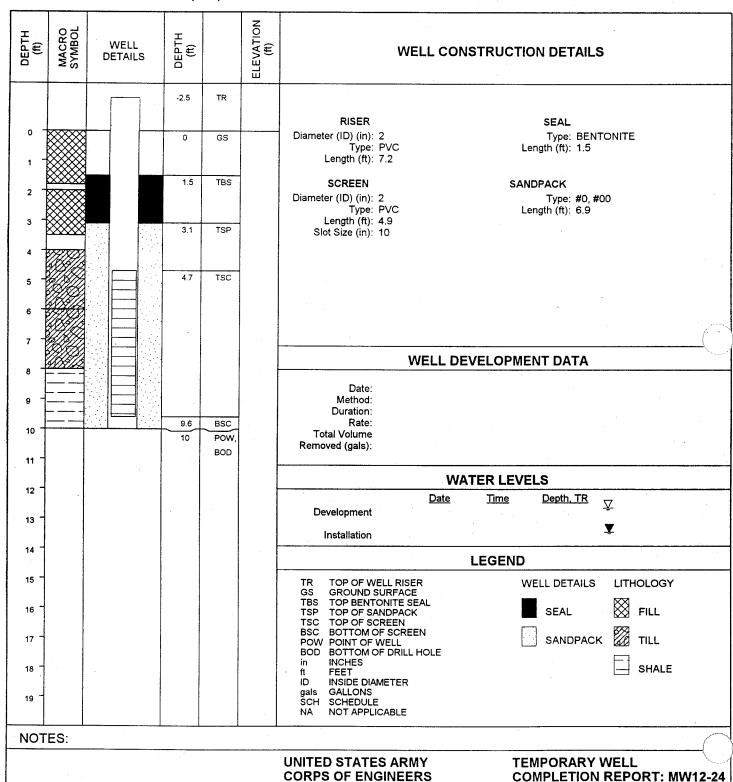
TOTAL DEPTH: 10 DEPTH TO WATER: BORING LOCATION:

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR CHECKED BY:



#### **TEMPORARY WELL COMPLETION REPORT: MW12-25**

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/18/98
WELL INSTALLATION COMPLETED 10/18/98

DRILLING CONTRACTOR: Maxim
DRILLING METHOD: HSA 8"
SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 10.3
DEPTH TO WATER:
BORING LOCATION:

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

**ELEVATION DATUM: NAVD1927** 

**TEMPORARY WELL** 

**COMPLETION REPORT: MW12-25** 

INSPECTOR: ITR CHECKED BY:

ELEVATION (ft) MACRO SYMBOL DEPTH (ft) DEPTH (ft) WELL WELL CONSTRUCTION DETAILS **DETAILS** RISER SEAL n Diameter (ID) (in): 2 0 GS Type: BENTONITE Type: PVC Length (ft): 1.95 Length (ft): 7.85 **SCREEN** SANDPACK TBS Diameter (ID) (in): 2 Type: #0, #00 Type: PVC Length (ft): 7.4 Length (ft): 4.9 Slot Size (in): 10 3.95 TSP 4.95 TSC **WELL DEVELOPMENT DATA** 8 Date: 9 Method: Duration: Rate: 10 9.85 BSC Total Volume 10.3 POW, Removed (gals): 11 BOD WATER LEVELS 12 <u>Date</u> Time Depth, TR  $\nabla$ Development 13 Ā Installation 14 **LEGEND** 15 TOP OF WELL RISER WELL DETAILS LITHOLOGY **GROUND SURFACE** TOP BENTONITE SEAL TOP OF SANDPACK TOP OF SCREEN BOTTOM OF SCREEN TBS 16 FILL TSP SEAL TSC BSC 17 SANDPACK POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES 18 SHALE FEET INSIDE DIAMETER ID gals GALLONS 19 SCHEDULE NOT APPLICABLE NOTES:

UNITED STATES ARMY

**CORPS OF ENGINEERS** 

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12 PROJECT NO.: 730047

PROJECT NO.: 730047
WELL INSTALLATION STARTED: 10/18/98
WELL INSTALLATION COMPLETED 10/18/98
DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8"
SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 10.1 DEPTH TO WATER:

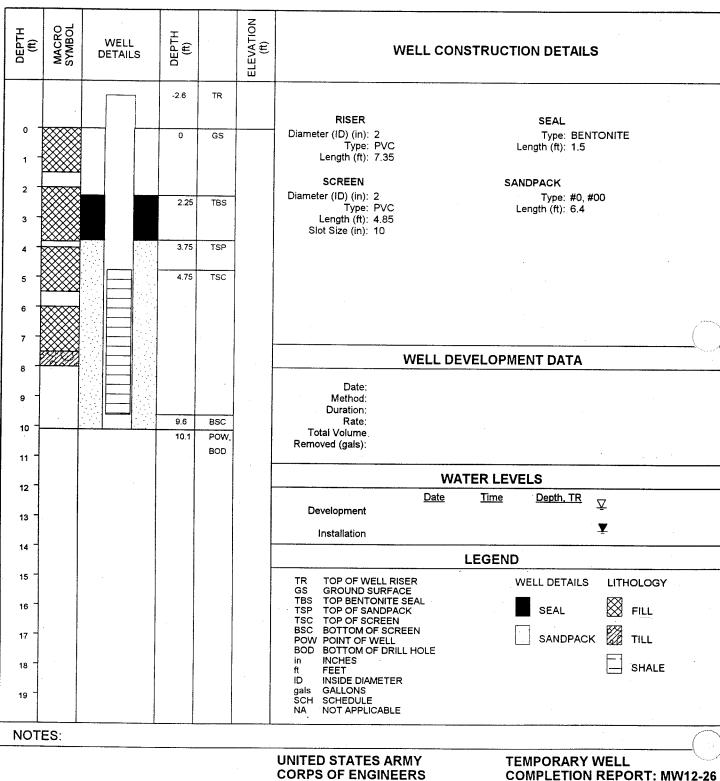
BORING LOCATION:

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR CHECKED BY:



# **TEMPORARY WELL COMPLETION REPORT: MW12-27**

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/4/98 WELL INSTALLATION COMPLETED 10/4/98

DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon TOTAL DEPTH: 12.9

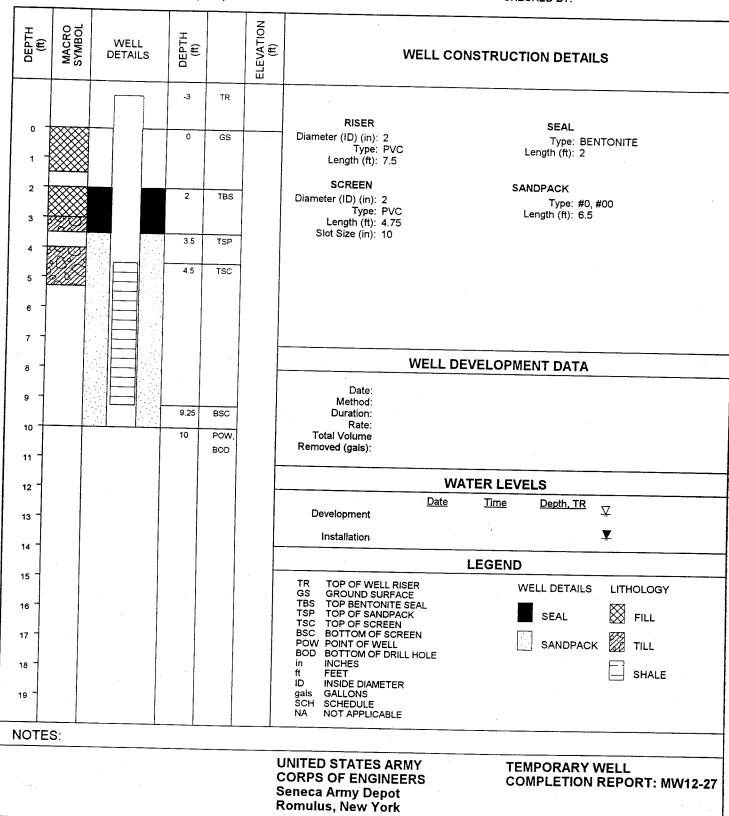
DEPTH TO WATER: **BORING LOCATION:** 

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR



PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12 PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/15/98
WELL INSTALLATION COMPLETED 10/15/98
DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8"
SAMPLING METHOD: Split Spoon

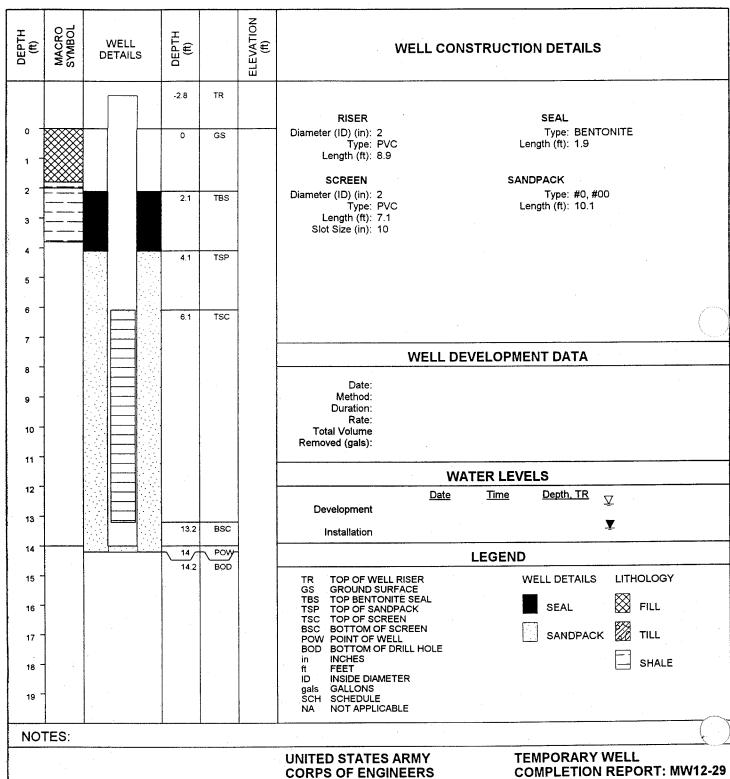
TOTAL DEPTH: 14
DEPTH TO WATER:
BORING LOCATION:

COORDINATE SYSTEM: NAD83

GROUND SURFACE ELEVATION:

ELEVATION DATUM: NAVD1927 INSPECTOR: ITR

CHECKED BY:



PROJECT: SEDA

PROJECT: SEDA
PROJECT LOCATION: Seneca Army Depot, Romulus, New York
ASSOCIATED AREA/UNIT: SEAD 12
PROJECT NO.: 730047
WELL INSTALLATION STARTED: 10/16/98
WELL INSTALLATION COMPLETED 10/16/98

DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8"
SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 14.1 DEPTH TO WATER:

**BORING LOCATION:** 

COORDINATE SYSTEM: NAD83

**GROUND SURFACE ELEVATION:** 

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR CHECKED BY:

| DЕРТН<br>(ft) | MACRO<br>SYMBOL | WELL<br>DETAILS                       |   | DEPTH<br>(ft) |             | ELEVATION<br>(ft) | WELL CONSTRUCTION DETAILS                                                                                            |
|---------------|-----------------|---------------------------------------|---|---------------|-------------|-------------------|----------------------------------------------------------------------------------------------------------------------|
|               |                 |                                       | 1 | -2.7          | TR          |                   |                                                                                                                      |
|               |                 |                                       |   |               |             |                   | RISER SEAL                                                                                                           |
| 1             |                 |                                       |   | 0             | GS          |                   | Diameter (ID) (in): 2 Type: BENTONITE Type: PVC Length (ft): 2 Length (ft): 8.5                                      |
| 2             |                 |                                       |   |               |             |                   | SCREEN SANDPACK                                                                                                      |
| 3             | <b>***</b>      |                                       |   | 2             | TBS         |                   | Diameter (ID) (in): 2 Type: #0, #00 Type: PVC Length (ft): 10.1 Length (ft): 7.2 Slot Size (in): 10                  |
| 4             |                 |                                       |   | 4             | TSP         |                   |                                                                                                                      |
| 5             |                 |                                       |   |               |             |                   |                                                                                                                      |
| 6             | ŀ               |                                       | - | 5.8           | TSC         | ·                 |                                                                                                                      |
|               |                 |                                       |   | 0.0           | .00         |                   |                                                                                                                      |
| 7 7           |                 |                                       |   |               |             |                   | W=11                                                                                                                 |
| 8 -           | ļ:              |                                       |   |               |             | .                 | WELL DEVELOPMENT DATA                                                                                                |
| 9             |                 |                                       |   |               |             |                   | Date:<br>Method:                                                                                                     |
| 10            |                 |                                       |   |               |             |                   | Duration:Rate:                                                                                                       |
|               |                 |                                       |   |               |             |                   | Total Volume<br>Removed (gals):                                                                                      |
| 11 7          |                 |                                       |   |               |             | -                 | WATER LEVELO                                                                                                         |
| 12            |                 |                                       |   |               |             |                   | WATER LEVELS  Date Time Depth, TR T                                                                                  |
| 13            |                 |                                       | - | 13            | BSC         |                   | Development                                                                                                          |
| 44 -          |                 |                                       |   | 13            | BSC         |                   | Installation                                                                                                         |
| 14            |                 | · · · · · · · · · · · · · · · · · · · |   | 14.1          | POW,<br>BOD |                   | LEGEND                                                                                                               |
| 15            |                 |                                       |   |               | 800         |                   | TR TOP OF WELL RISER WELL DETAILS LITHOLOGY GS GROUND SURFACE                                                        |
| 16            |                 |                                       |   |               |             |                   | TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK SEAL FILL                                                                 |
| 17            |                 |                                       |   |               |             |                   | TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL SANDPACK TILL                                               |
| 18            |                 |                                       |   |               |             |                   | BOD BOTTOM OF DRILL HOLE in INCHES                                                                                   |
| 19            |                 |                                       |   |               |             |                   | ff FEET  ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE                                              |
| NOTE          | ES:             |                                       |   |               |             |                   |                                                                                                                      |
|               |                 |                                       |   |               |             |                   | UNITED STATES ARMY CORPS OF ENGINEERS Seneca Army Depot Romulus, New York  TEMPORARY WELL COMPLETION REPORT: MW12-30 |

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/26/98 WELL INSTALLATION COMPLETED 10/26/98

DRILLING CONTRACTOR: Maxim DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon

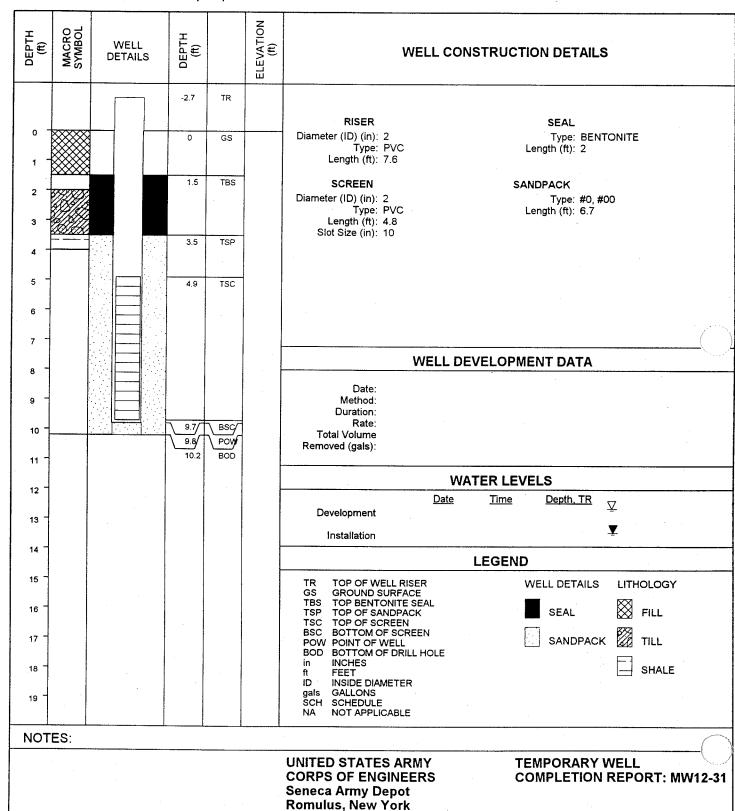
TOTAL DEPTH: 9.8 DEPTH TO WATER: BORING LOCATION:

COORDINATE SYSTEM: NAD83

**GROUND SURFACE ELEVATION:** 

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: TGH



# **TEMPORARY WELL COMPLETION REPORT: MW12-32**

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/26/98

WELL INSTALLATION COMPLETED 10/26/98 DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon TOTAL DEPTH: 10.5

DEPTH TO WATER:

BORING LOCATION:

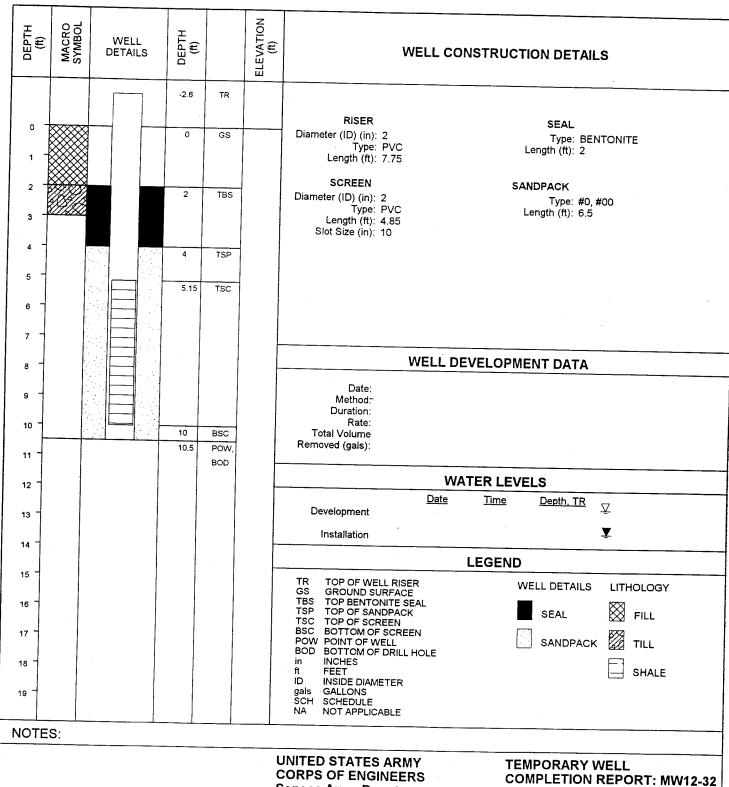
COORDINATE SYSTEM: NAD83

**GROUND SURFACE ELEVATION:** 

ELEVATION DATUM: NAVD1927

INSPECTOR: TGH

CHECKED BY:



BEDROCK MONITORING WELL **COMPLETION REPORT & INSTALLATION DETAIL** PROTECTIVE RISER COMPLETION ENGINEERING-SCIENCE, INC. CLIENT: Senew Army Depot Spack-12 RILIFS PROJECT: PROJECT NO: 730047 -01001 North of 804, immediately compression LOCATION: INSPECTOR: DRG/ITR CHECKED BY: 226 of Washest UST DRILLING CONTRACTOR: Maxim Technology POW DEPTH: 38' (BGS) DRILLER: Rodney Bush OUTER CASING INSTALLATION: 10/30/98 DRILLING COMPLETED: 11/3 / 98 INNER CASING INSTALLATION: 11/3/98 DEPTH TO BEDROCK: 16.8 SURFACE COMPLETION DATE: 11/4/98 38.8 BORING DEPTH: COMPLETION CONTRACTOR/CREW: Maxim DRILLING METHOD(S): HQ core CORE TYPE/SIZE: HQ (2.5" 3.1/2 BORING DIAMETER(S): FOOTAGE CORED: Sead-12 ASSOCIATED SWMU/AOC: ESTIMATED GROUND ELEVATION: PROTECTIVE CASING: DIAMETER: LENGTH: OUTER CASING: TC: -2.5 TYPE: Stect DIAMETER: LENGTH: RISER: TR:  $-2.5^{-1}$ TYPE: FUC SILL YO DIAMETER: SCREEN: SLOT DIAMETER: SIZE: ().010 POINT OF WELL: (SILT SUMP) 37,5 (BGS) TYPE: Sump POW: 38' (BCcs) GROUT: OUTER TYPE: CEMENT / BENTON TE LENGTH: 14.8 TG: TYPE: ( Elment / Bentanite LENGTH: INNER SEAL: TYPE: Bentinite chip SAND PACK: LENGTH: SURFACE COLLAR: TYPE: Concrete RADIUS: 2 THICKNESS EDGE: 4" THICKNESS CENTER: / CENTRALIZER DEPTHS DEPTH 1: 38'-37.5' DEPTH 2: 27.5'-27.0' DEPTH 4:

\* ALL MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 11/1/98 WELL INSTALLATION COMPLETED 11/1/98

DRILLING CONTRACTOR: Maxim DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon

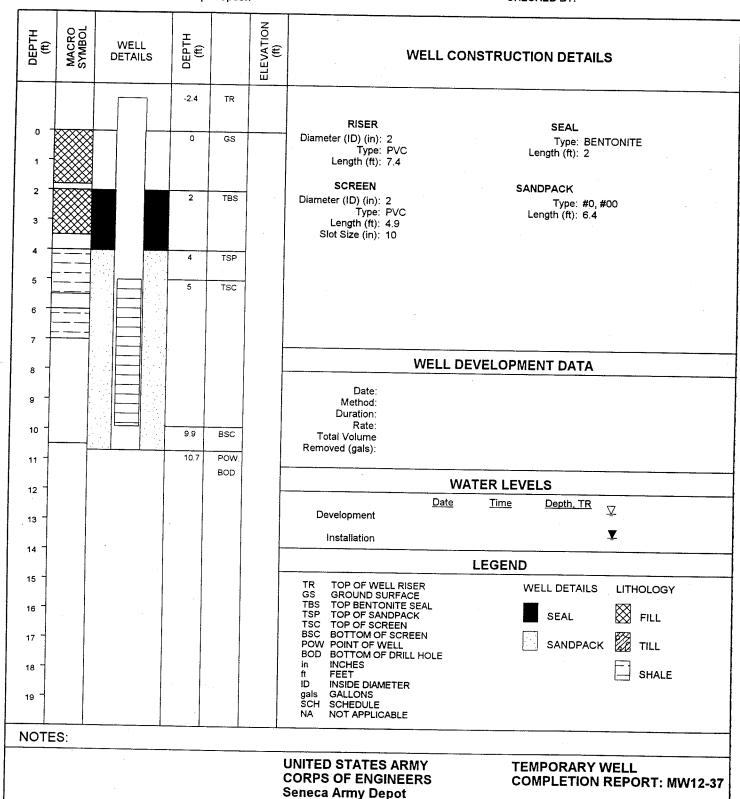
TOTAL DEPTH: 10.7 **DEPTH TO WATER: BORING LOCATION:** 

COORDINATE SYSTEM: NAD83

**GROUND SURFACE ELEVATION:** 

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: TGH CHECKED BY:



Romulus, New York

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 11/1/98 WELL INSTALLATION COMPLETED 11/1/98

DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 10.5 **DEPTH TO WATER:** 

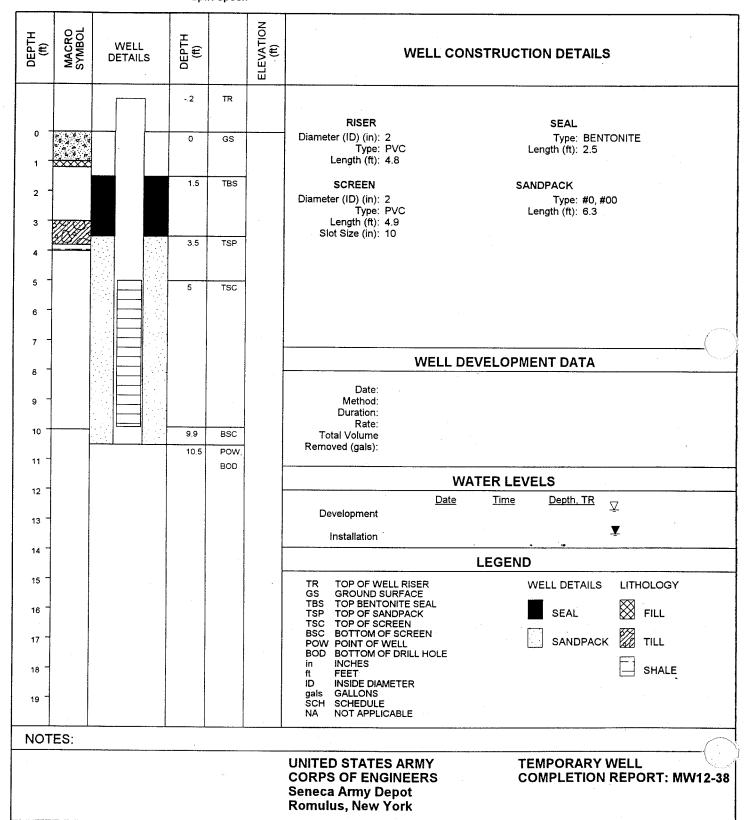
**BORING LOCATION:** 

COORDINATE SYSTEM: NAD83

**GROUND SURFACE ELEVATION:** 

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: TGH



PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 11/1/98 WELL INSTALLATION COMPLETED 11/1/98 DRILLING CONTRACTOR: Maxim

DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon TOTAL DEPTH: 10.5

DEPTH TO WATER:

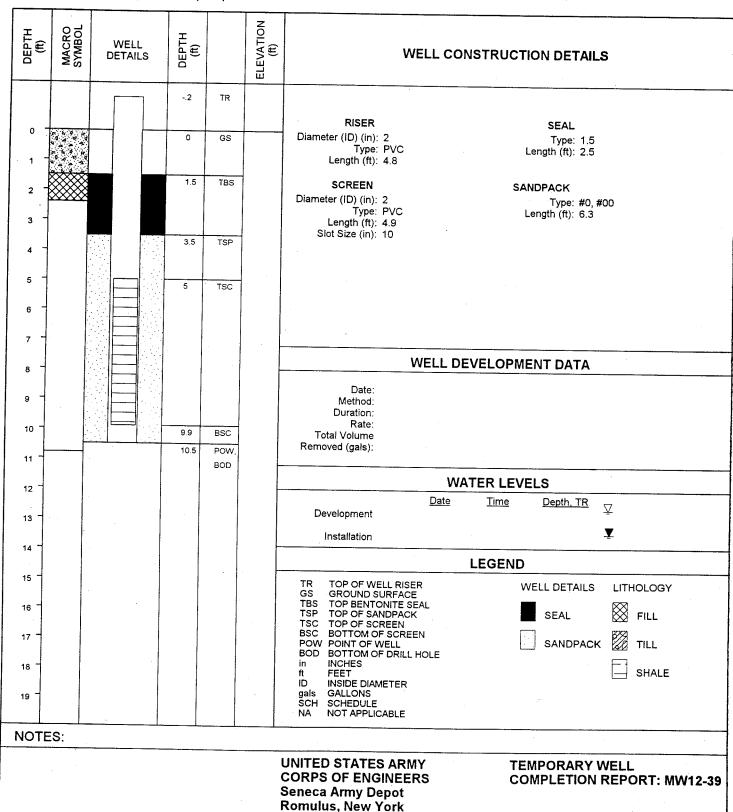
**BORING LOCATION:** 

COORDINATE SYSTEM: NAD83

**GROUND SURFACE ELEVATION:** 

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: TGH



## **TEMPORARY WELL COMPLETION REPORT: MW12-40**

PROJECT: SEDA

PROJECT LOCATION: Seneca Army Depot, Romulus, New York

ASSOCIATED AREA/UNIT: SEAD 12

PROJECT NO.: 730047

WELL INSTALLATION STARTED: 10/15/98
WELL INSTALLATION COMPLETED 10/15/98

DRILLING CONTRACTOR: Maxim DRILLING METHOD: HSA 8" SAMPLING METHOD: Split Spoon

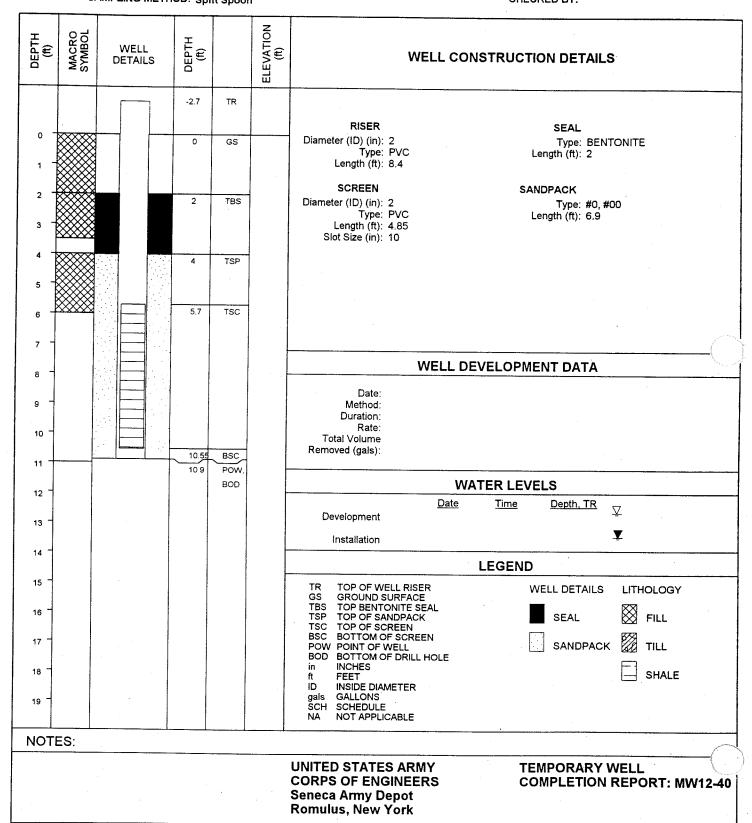
TOTAL DEPTH: 10.9 DEPTH TO WATER:

**BORING LOCATION:** 

COORDINATE SYSTEM: NAD83 **GROUND SURFACE ELEVATION:** 

**ELEVATION DATUM: NAVD1927** 

INSPECTOR: ITR



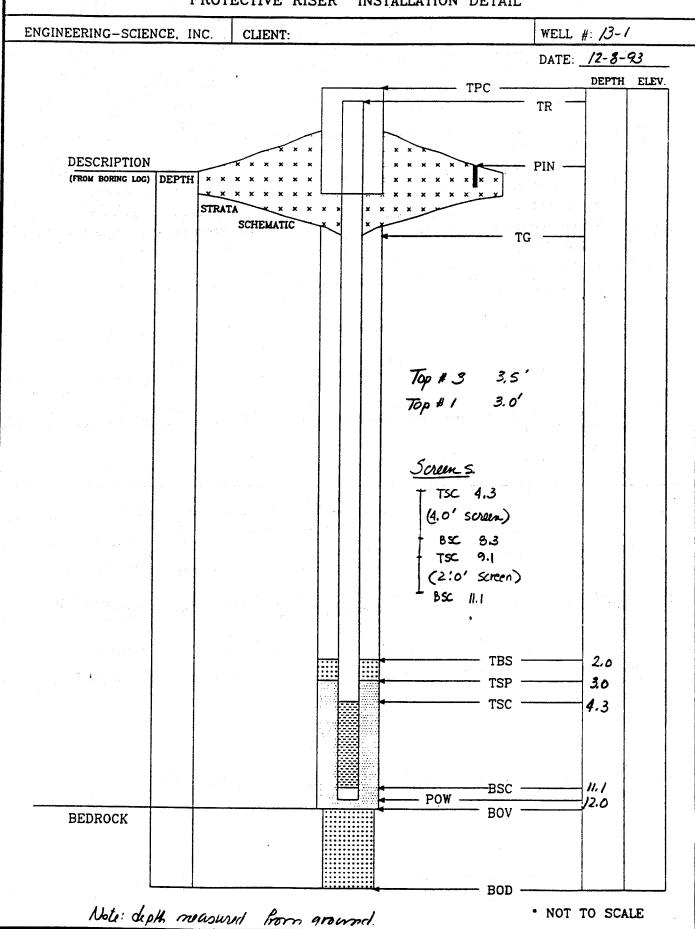
OVERBURDEN MONITORING WELL PAGE 1 OF 2 COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: M W /3-1 PROJECT: 10 SWMU. PROJECT NO: LOCATION: SEAD 13 INSPECTOR: 55 CHECKED BY: DRILLING CONTRACTOR: Empire POW DEPTH: /2 ' DRILLER: lohn INSTALLATION STARTED: 12-8-93 DRILLING COMPLETED: 12-8-93 INSTALLATION COMPLETED: 12-8-93BORING DEPTH: 12' SURFACE COMPLETION DATE: DRILLING METHOD(S): HSA COMPLETION CONTRACTOR/CREW: Empire BORING DIAMETER(S): 81/2 = BEDROCK CONFIRMED (Y/N?) ASSOCIATED SWMU/AOC: ESTIMATED GROUND ELEVATION: PROTECTIVE SURFACE CASING: DIAMETER: 4"x 4" LENGTH: RISER: TR: TYPE: PYC 40 DIAMETER: 2" SCREEN: TSC: 4.3' TYPE: TOJZ 2" LENGTH: 2'+4' SIZE: 0.01" POINT OF WELL: (SILT SUMP) TYPE: PVC point BSC: POW: /2.0 GROUT: TYPE: Coment-bonionia LENGTH: TYPE: bento nite seles TSP: 3.0' #1 3.5' =3 TYPE: #3 and #1 SAND PACK: LENGTH: SURFACE COLLAR: RADIUS: 2'x 2' TYPE: THICKNESS CENTER: THICKNESS EDGE: / CENTRALIZER DEPTHS DEPTH 1:\_\_\_\_\_ DEPTH 2:\_\_\_\_ DEPTH 3: DEPTH 4: COMMENTS:

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

\*ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

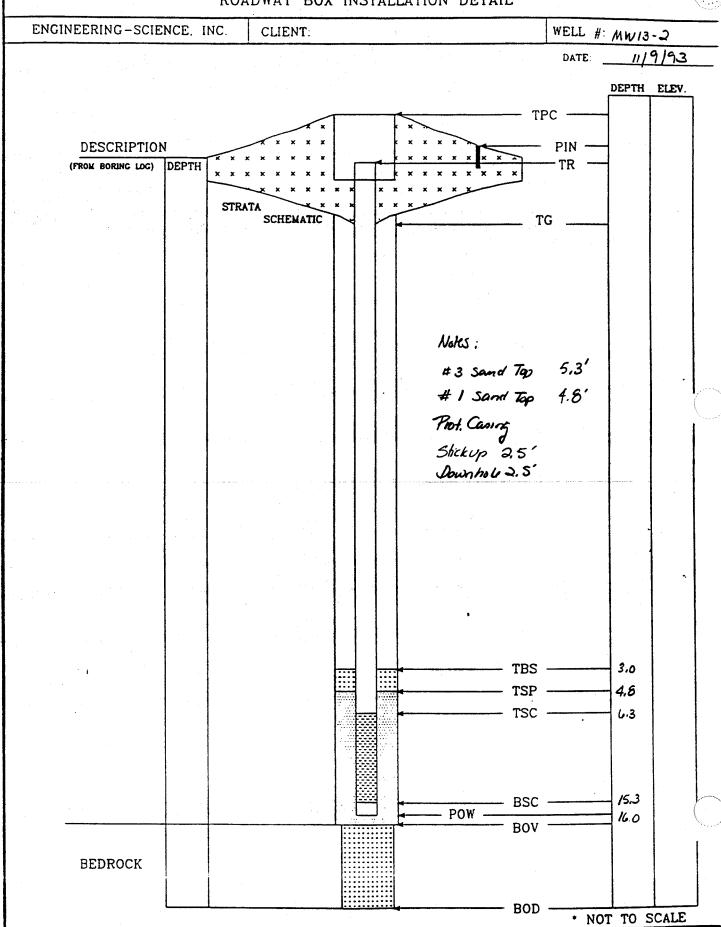
# OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL



OVERBURDEN MONITORING WELL PAGE 1 OF 2 COMPLETION REPORT & INSTALLATION DETAIL ROADWAY BOX - SURFACE COMPLETION ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW/3-2 PROJECT: 10 SWMII PROJECT NO: LOCATION: SEAD 12 INSPECTOR: F5 CHECKED BY: DRILLING CONTRACTOR: Empire POW DEPTH: 160' DRILLER: INSTALLATION STARTED: 11/9/93 DRILLING COMPLETED: 11/9/93 BORING DEPTH: SURFACE COMPLETION DATE: DRILLING METHOD(S): HSA COMPLETION CONTRACTORICREW: 9mpin BORING DIAMETER(S): 854 BEDROCK CONFIRMED (Y/N?) ASSOCIATED SWMU/AOC: ESTIMATED GROUND ELEVATION: PROTECTIVE SURFACE CASING: DIAMETER: 4"x 4" She! LENGTH: 5' total RISER: DIAMETER: 2" LENGTH: SCREEN: SLOT DIAMETER: 11 12" LENGTH: 9.0 TYPE: SIZE: ad/ POINT OF WELL: (SILT SUMP) TYPE: PYC COR GROUT: TYPE: Coment - ben boutelength: SEAL: TYPE: Benton - pellets LENGTH: SAND PACK: TYPE: # 34 # / S./ICC SURFACE COLLAR: TYPE: Cement RADIUS: J'x J' THICKNESS CENTER: THICKNESS EDGE: CENTRALIZER DEPTHS DEPTH 1: DEPTH 2: DEPTH 3: COMMENTS: • ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

# OVERBURDEN MONITORING WELL ROADWAY BOX INSTALLATION DETAIL



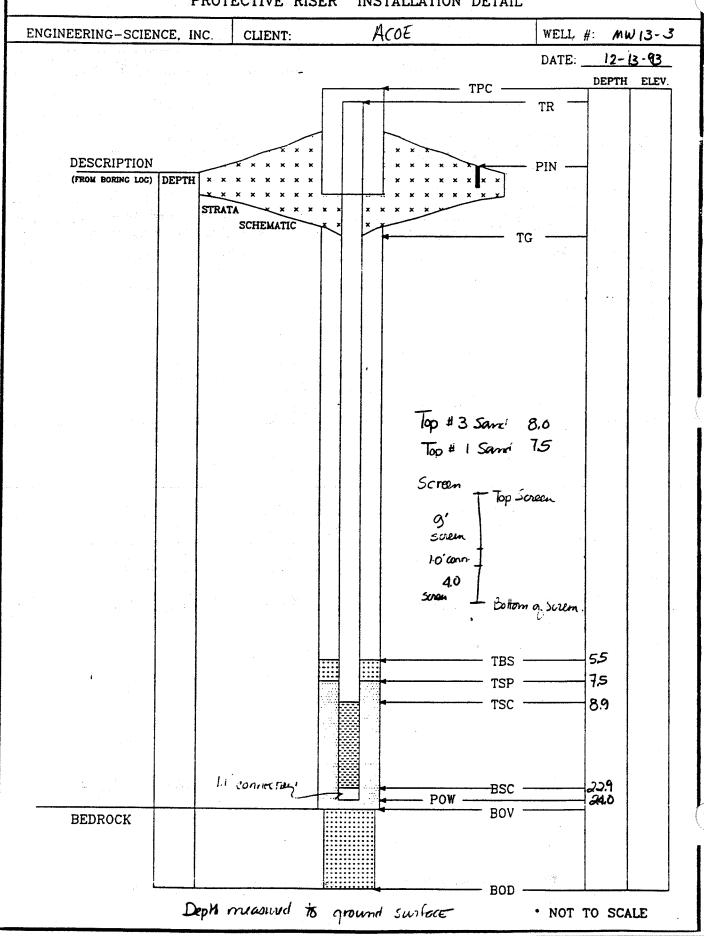
OVERBURDEN MONITORING WELL **COMPLETION REPORT & INSTALLATION DETAIL** PROTECTIVE RISER COMPLETION ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW13-3 PROJECT: 10 SWMU PROJECT NO: LOCATION: SEADIS INSPECTOR: CHECKED BY: DRILLING CONTRACTOR: Empire POW DEPTH: 24.0 DRILLER: INSTALLATION STARTED: 12-8-93 DRILLING COMPLETED: 12-13-93 INSTALLATION COMPLETED: 12-13-93 24.0' BORING DEPTH: SURFACE COMPLETION DATE: 12-13-93 DRILLING METHOD(S): HSA COMPLETION CONTRACTOR/CREW: 8'2" BORING DIAMETER(S): BEDROCK CONFIRMED (Y/N?) ASSOCIATED SWMU/AOC: ESTIMATED GROUND ELEVATION: PROTECTIVE SURFACE CASING: DIAMETER: 4" x 4" STEE! LENGTH: RISER: TWO Screens - 4' and 9' SCREEN: SLOT TSC: 6,9' TYPE: PVC-40 DIAMETER: SIZE: <u>001</u>4 POINT OF WELL: (SILT SUMP) TYPE: PVC-point GROUT: LENGTH: 5.5 SEAL: TYPE: bombonit pellets LENGTH: TSP: #3-8' #1-7.5' TYPE: #3+ #1 SAND PACK: LENGTH: SURFACE COLLAR: RADIUS: 2'x2' THICKNESS CENTER: TYPE: THICKNESS EDGE: CENTRALIZER DEPTHS DEPTH 1: DEPTH 2: 🎾 DEPTH 3: COMMENTS:

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

\* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

# OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL



|                                                              | PAGE 1 OF 2                                          |
|--------------------------------------------------------------|------------------------------------------------------|
| •                                                            | ONITORING WELL & INSTALLATION DETAIL ISER COMPLETION |
|                                                              | COE WELL #: MW13-4                                   |
| PROJECT: /O SWMU.                                            | PROJECT NO:                                          |
| location: <u>GEAD</u> /3                                     | INSPECTOR: ES/MB/KK                                  |
|                                                              | CHECKED BY:                                          |
| DRILLING CONTRACTOR: Empire                                  | POW DEPTH: 8.5 '                                     |
| driller: Soft                                                | INSTALLATION STARTED: 12-15-93                       |
| DRILLING COMPLETED:                                          | INSTALLATION COMPLETED:                              |
| BORING DEPTH: 8,5 '                                          | SURFACE COMPLETION DATE:                             |
| DRILLING METHOD(S): H5A                                      | COMPLETION CONTRACTOR/CREW: Empin / Scott            |
| BORING DIAMETER(S): 81/2"                                    | BEDROCK CONFIRMED (Y/N7)                             |
| ASSOCIATED SWMU/AOC: /3                                      | ESTIMATED GROUND ELEVATION:                          |
| PROTECTIVE SURFACE CASING:  DIAMETER: 4" × 4" She!           | LENGTH:                                              |
| RISER:  TR: TYPE: <u>PVC- 40</u>                             | DIAMETER: 2" LENGTH:                                 |
| SCREEN:                                                      | SLOT                                                 |
| TSC: 2.5' TYPE: PVC 40                                       | DIAMETER: 2" LENGTH: 4.0' SIZE: 0.01"                |
| POINT OF WELL: (SILT SUMP)  TYPE: <u>PYC point</u> BSC: 7.5' | POW: <u>8,5</u>                                      |
| GROUT: TG: <u>Ground</u> TYPE: <u>6</u>                      | ment-bentonite LENGTH: 1,5'                          |
| SEAL: TBS: 15' TYPE: ba                                      | ntonite pellets LENGTH: 1.0'                         |
| SAND PACK: TSP: <u>#1-25' #3-3.0'</u> TYPE: <u>#</u>         | 3 and # / LENGTH: <u>6.0</u>                         |
| SURFACE COLLAR:                                              |                                                      |
| TYPE: RADIUS: 2'x2'                                          | THICKNESS CENTER: _/ THICKNESS EDGE: _/              |
|                                                              |                                                      |
| CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2:                        | DEPTH 3: DEPTH 4:                                    |
| CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2: COMMENTS:              | DEPTH 4:                                             |
| CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2:                        | DEPTH 3: DEPTH 4:                                    |

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

\*ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

### OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL ACOE WELL #: MW13-4 ENGINEERING-SCIENCE, INC. CLIENT: DATE: 12-15-93 DEPTH ELEV. TPC -TR **DESCRIPTION** PIN (FROM BORING LOG) DEPTH TG Top # 1 Sami 2.5' Top # 3 Sand 30' 1.5 TBS 2.5' 3.5′ TSC POW BOV **BEDROCK**

BOD

· NOT TO SCALE

|                                                                                                                                                                                                                                                                 | PAGE 1 OF 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OVERBURDEN M                                                                                                                                                                                                                                                    | ONITORING WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                 | & INSTALLATION DETAIL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| ROADWAY BOX -                                                                                                                                                                                                                                                   | SURFACE COMPLETION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                 | COE WELL #: MW 13-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| PROJECT: 10 SWMU                                                                                                                                                                                                                                                | PROJECT NO:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| LOCATION: 5 EAD 13                                                                                                                                                                                                                                              | INSPECTOR: ES/LB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                 | CHECKED BY:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| DRILLING CONTRACTOR: Empire                                                                                                                                                                                                                                     | POW DEPTH: 16.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DRILLER: Bob                                                                                                                                                                                                                                                    | INSTALLATION STARTED: ///8/9_3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| DRILLING COMPLETED: 11/9/93                                                                                                                                                                                                                                     | INSTALLATION COMPLETED: 11/9/9 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| BORING DEPTH: /6,0'                                                                                                                                                                                                                                             | SURFACE COMPLETION DATE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| DRILLING METHOD(S): HSA                                                                                                                                                                                                                                         | COMPLETION CONTRACTOR/CREW: Empiric                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| BORING DIAMETER(S): 81/2"                                                                                                                                                                                                                                       | BEDROCK CONFIRMED (Y/N?)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| ASSOCIATED SWMU/AOC: 13                                                                                                                                                                                                                                         | ESTIMATED GROUND ELEVATION:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| PROTECTIVE SURFACE CASING:                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DIAMETER: 4" x 4" STEU                                                                                                                                                                                                                                          | LENGTH: 5.0' total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| RISER:                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TR: TYPE: PVC- 40                                                                                                                                                                                                                                               | DIAMETER: 2" LENGTH:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SCREEN:                                                                                                                                                                                                                                                         | . SLOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| SCREEN: TSC: 6.3' TYPE: PVC-40                                                                                                                                                                                                                                  | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                 | DIAMETER: 11 1 2" LENGTH: 90 SIZE: 0,0/"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| POINT OF WELL: (SILT SUMP)                                                                                                                                                                                                                                      | DIAMETER: 11 2" LENGTH: 90' SIZE: 0,01"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| POINT OF WELL: (SILT SUMP)                                                                                                                                                                                                                                      | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| TSC 6.3' TYPE: Pvc 40  POINT OF WELL: (SILT SUMP)  TYPE: Pvc Cap BSC 15.3  GROUT:                                                                                                                                                                               | DIAMETER: 11 2" LENGTH: 90' SIZE: 0,01"  POW: 16.0'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| TSC                                                                                                                                                                                                                                                             | POW: 16.0'  Pow. 16.0'  Ment - beatonite Length: 3.0'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| TSC                                                                                                                                                                                                                                                             | POW: 16.0'  POW: 16.0'  Powerd-beaton/le LENGTH: 3.0'  Replant pells LENGTH: 1.8'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TSC                                                                                                                                                                                                                                                             | POW: 16.0'  POW: 16.0'  Powerd-beaton/le LENGTH: 3.0'  Replant pells LENGTH: 1.8'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TSC 6.3' TYPE: PVC-40  POINT OF WELL: (SILT SUMP)  TYPE: PVC Cap BSC 15.3  GROUT:  TG: Graind TYPE: (4)  SEAL: TBS: 3.0' TYPE: 13  SAND PACK: TSP: #3-5.3'#1-4.8' TYPE: #3  SURFACE COLLAR:                                                                     | POW: 16.0'  POW: 16.0'  Powerd-beaton/le LENGTH: 3.0'  Replant pells LENGTH: 1.8'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TSC 6.3' TYPE: PVC-40  POINT OF WELL: (SILT SUMP)  TYPE: PVC Cap BSC 15.3  GROUT:  TG: Graind TYPE: (6.4)  SEAL: TBS: 3.0' TYPE: 13  SAND PACK: TSP: #3-5.3'#1-4.8' TYPE: #3  SURFACE COLLAR:                                                                   | POW: 16.0'  POW: 16.0'  Powerd-beaton/le LENGTH: 3.0'  Replant pells LENGTH: 1.8'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TSC 6.3' TYPE: PVC-40  POINT OF WELL: (SILT SUMP)  TYPE: PVC Cap BSC: 15.3  GROUT:  TG: Graind TYPE: Cult  SEAL: TBS: 3.0' TYPE: 13  SAND PACK: TSP: #3-5.3' #1-4.8' TYPE: #3  SURFACE COLLAR:  TYPE: Comput RADIUS: 2' x 2'                                    | POW: 16.0'  POW: 16.0'  Manual - beatonite Length: 3.0'  Sentente pellets Length: 1.8'  3.#1 Silica Length: 10.2'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TSC 6.3' TYPE: PVC-40  POINT OF WELL: (SILT SUMP)  TYPE: PVC Cap BSC: 15.3  GROUT:  TG: Graind TYPE: Cult  SEAL: TBS: 3.0' TYPE: 13  SAND PACK: TSP: #3-5.3' #1-4.8' TYPE: #3  SURFACE COLLAR:  TYPE: Comput RADIUS: 2' x 2'                                    | POW: 16.0'  POW: 16.0'  Manual - beatonite Length: 3.0'  Sentente pellets Length: 1.8'  3.#1 Silica Length: 10.2'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TSC 6.3' TYPE: PVC-40  POINT OF WELL: (SILT SUMP)  TYPE: PVC CAD BSC 15.3  GROUT:  TG: Graind TYPE: 62  SEAL: TBS: 3.0' TYPE: 13  SAND PACK: TSP: #3-5.3'#1-4.8' TYPE: #:  SURFACE COLLAR:  TYPE: Comput RADIUS: 2' x 2'  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2: | POW: 16.0'  POW: 1 |
| TSC 6.3' TYPE: PVC-40  POINT OF WELL: (SILT SUMP)  TYPE: PVC CAD BSC 15.3  GROUT:  TG: Graind TYPE: 62  SEAL: TBS: 3.0' TYPE: 13  SAND PACK: TSP: #3-5.3'#1-4.8' TYPE: #:  SURFACE COLLAR:  TYPE: Comput RADIUS: 2' x 2'  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2: | POW: 16.0'  POW: 1 |
| TSC 6.3' TYPE: PVC-40  POINT OF WELL: (SILT SUMP)  TYPE: PVC CAD BSC 15.3  GROUT:  TG: Graind TYPE: 62  SEAL: TBS: 3.0' TYPE: 13  SAND PACK: TSP: #3-5.3'#1-4.8' TYPE: #:  SURFACE COLLAR:  TYPE: Comput RADIUS: 2' x 2'  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2: | POW: 16.0'  POW: 1 |
| TSC 6.3' TYPE: PVC-40  POINT OF WELL: (SILT SUMP)  TYPE: PVC CAD BSC 15.3  GROUT:  TG: Graind TYPE: 62  SEAL: TBS: 3.0' TYPE: 13  SAND PACK: TSP: #3-5.3'#1-4.8' TYPE: #:  SURFACE COLLAR:  TYPE: Comput RADIUS: 2' x 2'  CENTRALIZER DEPTHS  DEPTH 1: DEPTH 2: | POW: 16.0'  POW: 1 |
| TSC 6.3' TYPE: PVC-40  POINT OF WELL: (SILT SUMP)  TYPE: PVC Cap BSC 15.3  GROUT:  TG: Ground TYPE: 6.2  SEAL: TBS: 3.0' TYPE: 15  SAND PACK: TSP: #3-5.3'#1-4.8' TYPE: #:  SURFACE COLLAR:  TYPE: 6ment RADIUS: 2' x 2'  CENTRALIZER DEPTHS                    | POW: 16.0'  POW: 16.0'  MANUAL DE LENGTH: 3.0'  POM LENGTH: 18'  SIZE: 0.01"  POW: 16.0'  THICKNESS CENTER: 10.2'  THICKNESS CENTER: 1'  THICKNESS EDGE: 1'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

## OVERBURDEN MONITORING WELL ROADWAY BOX INSTALLATION DETAIL

ROADWAY BOX INSTALLATION DETAIL ENGINEERING-SCIENCE, INC. WELL #: NW/3-5 CLIENT: A COE DATE 11/9/93 DEPTH ELEV. TPC -PIN DESCRIPTION TR (FROM BORING LOG) DEPTH TG SCHEMATIC Notes: Top of #3 Sand 5.3'
Top of #1 Sand 4.8' Protect. Caning stick up 2.5' Down not 2.5' POWIS COP not pointed and 3.0' TBS -4.6 TSC -3عا 15.3 0.7' con nector 16.0 POW BOV BEDROCK · NOT TO SCALE Note: All dop the measured from around surivite

### OVERBURDEN MONITORING WELL **COMPLETION REPORT & INSTALLATION DETAIL**

| ROTECTIVE                             |                                         |
|---------------------------------------|-----------------------------------------|
| ENGINEERING-SCIENCE, INC. CLIENT: Ac  | COE WELL #: /3-6                        |
| PROJECT: /O SW MU                     | PROJECT NO:                             |
| LOCATION: SEAD 13                     | INSPECTOR: ES/MB/KK                     |
|                                       | CHECKED BY:                             |
| DRILLING CONTRACTOR: Empire           | POW DEPTH:/O. O´                        |
| DRILLER: Scott                        | INSTALLATION STARTED: /2-/5- 93         |
| DRILLING COMPLETED: 12-15-93          | INSTALLATION COMPLETED: 12-15-93        |
| BORING DEPTH: 10.0'                   | SURFACE COMPLETION DATE: 12-17-93       |
| DRILLING METHOD(S): HS A              | COMPLETION CONTRACTOR/CREW: Fmpic/Scott |
| BORING DIAMETER(S): 8"2."             | BEDROCK CONFIRMED (Y/N?)                |
| ASSOCIATED SWMU/AOC: /3               | ESTIMATED GROUND ELEVATION:             |
| PROTECTIVE SURFACE CASING:            |                                         |
| DIAMETER: 4"x 4" Steel                | LENGTH:                                 |
| RISER:                                |                                         |
| TR: TYPE: <u>PVC- 40</u>              | DIAMETER: 2" LENGTH:                    |
| SCREEN:                               | s.or                                    |
| TSC: 5.0' TYPE: PVC-40                | DIAMETER: 2" LENGTH: 4' SIZE: 0.01"     |
| POINT OF WELL: (SILT SUMP)            |                                         |
| TYPE: PVC point BSC: 9.0'             | POW: <i>10.</i> O                       |
| GROUT:                                |                                         |
| TG: Graund Type: (                    | Cem-benfonte LENGTH: 25'                |
| SEAL: TBS: <u>2.5'</u> TYPE: <u>2</u> | benion to pelles length: 1.0'           |
| SAND PACK: TSP: 3.5'-1/9.0-#3 TYPE:   | ,                                       |
| SURFACE COLLAR:                       |                                         |
| TYPE: RADIUS:                         | THICKNESS CENTER: / THICKNESS EDGE: /   |
| CENTRALIZER DEPTHS                    |                                         |
| DEPTH 1: DEPTH 2:                     | DEPTH 3: DEPTH 4:                       |
|                                       |                                         |
| COMMENTS:                             |                                         |
|                                       |                                         |
|                                       |                                         |
|                                       | Ĭ                                       |
| · All DEPTH MEAS                      | SUREMENTS REFERENCED TO GROUND SURFACE  |
| ALL DEFIT MEAS                        |                                         |

SEE PAGE 2 FOR SCHEMATIC

# OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

| DESCRIPTION  (FROM BORING LOC) DEPTH  STRATA SCHEMATIC  TO  TO  TO  TO  TO  TO  TO  TO  TO  T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ENGINEERING-SCIENCE, INC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | CLIENT:                               | ACOE            | WELL # | MW                      | 13-6  |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------|--------|-------------------------|-------|---|
| DESCRIPTION (FROM BORING LOC) DEPTH  STRATA SCHEMATIC  TO  TO  TO  TO  TO  TO  TO  TO  TO  T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | A CONTRACTOR OF THE PROPERTY O |                                       |                 |        |                         |       | - |
| DESCRIPTION  (FROM SOURCE LOC) DEPTH  STRATA SCHEMATIC  TO  TO  TO  TO  TO  TO  TO  TO  TO  T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       | TDC             |        | DEPTH                   | ELEV. |   |
| DESCRIPTION  (FROM BORRIC LOC) DEPTH  STRATA SCHEMATIC  TO  TO  TO  TO  TO  TO  TO  TO  TO  T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       | IFC             |        | <del>-  </del>          | 1     |   |
| Top #   Saint   3.5'   Top #   Saint   4.0'   TSP   3.5   TSP   3.5   TSC   TSC   TSC   TSC   TSC   BOD   BOD |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                 |        |                         |       |   |
| Top #   Saint   3.5'   Top #   Saint   4.0'   TSP   3.5   TSP   3.5   TSC   TSC   TSC   TSC   TSC   BOD   BOD |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                 |        |                         |       |   |
| Top #   Saint   3.5'   Top #   Saint   4.0'   TSP   3.5   TSP   3.5   TSC   TSC   TSC   TSC   TSC   BOD   BOD | <b>***</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ×××                                   | x x             | DIM    |                         |       |   |
| Top #   Saund 3.5' Top # 3 Saund 4.0'  TBS 2.5 TSP 3.5 TSC 5.0  BEDROCK BOV BOV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | X x x x x x                           |                 | rin —  |                         |       |   |
| Top # 1 Sound 3.5' Top # 3 Sound 4.0'  TBS 25 TSP 3.5 TSC 5.0  BEDROCK  BEDROCK  BOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | (FROM BORING LOG)   DEPTH   ×                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | * * * * * * * * * * * * * * * * * * * |                 |        |                         |       |   |
| Top # / Sound 3.5' Top # / Sound 3.5' Top # 3 Saund 4.0'  TBS 2.5 TSP 3.5 TSC 5.0  BEDROCK  BEDROCK  BOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | STR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | X X X                                 | x x   x x x x   | - i    |                         |       |   |
| Top # 1 Sand 3.5'  Top # 3 Sand 4.0'  TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       | × × ×           |        |                         |       |   |
| TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       | I I I           |        | 1                       | 1     |   |
| TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                 |        | ,                       |       |   |
| TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                 |        |                         |       |   |
| TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                 |        |                         | 1     |   |
| TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                 |        |                         |       |   |
| TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                 |        |                         |       |   |
| TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                 |        |                         |       |   |
| TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | the state of the s |                                       |                 |        |                         |       |   |
| TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                 |        |                         |       | 1 |
| TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       | Ton # 150.      | 35'    |                         | İ     | 1 |
| TBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                 |        |                         |       | ! |
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| TSP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       | 1   1   7       | :      |                         |       | ١ |
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|                                           | PAGE 1 OF 2                                  |  |  |  |  |  |  |  |  |  |
|-------------------------------------------|----------------------------------------------|--|--|--|--|--|--|--|--|--|
| OVERBURDEN M                              | ONITORING WELL                               |  |  |  |  |  |  |  |  |  |
| COMPLETION REPORT & INSTALLATION DETAIL   |                                              |  |  |  |  |  |  |  |  |  |
| PROTECTIVE RISER COMPLETION               |                                              |  |  |  |  |  |  |  |  |  |
| ENGINEERING-SCHENCE, INC. CLIENT:         | WELL #: MW 13 F                              |  |  |  |  |  |  |  |  |  |
| PROJECT: 10 SWMU ESI                      | PROJECT NO: 720478-01001                     |  |  |  |  |  |  |  |  |  |
| LOCATION: Senera Army Depot, Dormlus, N   | INSPECTOR: YY BIT                            |  |  |  |  |  |  |  |  |  |
|                                           | CHECKED BY:                                  |  |  |  |  |  |  |  |  |  |
| DRILLING CONTRACTOR: EMPINE SOILS         | POW DEPTH: 8.0 Ft                            |  |  |  |  |  |  |  |  |  |
| DRILLER: JOHN ED                          | INSTALLATION STARTED: 1-24-94                |  |  |  |  |  |  |  |  |  |
| DRILLING COMPLETED: 1-24-14               | INSTALLATION COMPLETED: 1-24-94              |  |  |  |  |  |  |  |  |  |
| BORING DEPTH: 8-0 FT                      | SURFACE COMPLETION DATE: 1-25 14             |  |  |  |  |  |  |  |  |  |
| DRILLING METHODIS: Hollow Stam Anger      | COMPLETION CONTRACTOR/CREW: MA               |  |  |  |  |  |  |  |  |  |
| BORING DIAMETER(S): 8.5 in                | BEDROCK CONFIRMED (Y)                        |  |  |  |  |  |  |  |  |  |
| ASSOCIATED SWMU/ADC SEAO 13               | ESTIMATED GROUND ELEVATION:                  |  |  |  |  |  |  |  |  |  |
| PROTECTIVE SURFACE CASING:                |                                              |  |  |  |  |  |  |  |  |  |
| DIAMBTER: 2 IA                            | LBNOTH:                                      |  |  |  |  |  |  |  |  |  |
| RISTR:                                    |                                              |  |  |  |  |  |  |  |  |  |
| TR: + 2.5ft. TYPE: TYTE                   | DIAMETER: 2 1 LENGTIL:                       |  |  |  |  |  |  |  |  |  |
| SCREEN: TSC: 5.0 ft. TYPS: [VL            | DIAMETER: 2 in LENOTH: 2 Fr SIZE: 100 in.    |  |  |  |  |  |  |  |  |  |
| POINT OF WELL: (SILT SLAMP)  TYPE: PY(    | POW: 6.0                                     |  |  |  |  |  |  |  |  |  |
| GROUT: NA TO: TYPE:                       | LENGTH:                                      |  |  |  |  |  |  |  |  |  |
| SEAL: TER 3.0 F4 TYPE                     | enhure pellets LENGTH 1.0 ft.                |  |  |  |  |  |  |  |  |  |
| SAND PACK: TSP: 4.0-F1. TYPE:             | #3 Pol - 60 HINGH                            |  |  |  |  |  |  |  |  |  |
| SURFACE COILAR: TYPE: Quikiete Radius 17. | THICKNESS CENTER: 3.0fr THICKNESS EDGE: 5f2. |  |  |  |  |  |  |  |  |  |
| CENTRALIZER DEPTHS NA DEPTH 1: DEPTH 2:   | DEPTH 3: DEPTH 4:                            |  |  |  |  |  |  |  |  |  |
| COMMENTS:                                 |                                              |  |  |  |  |  |  |  |  |  |
|                                           |                                              |  |  |  |  |  |  |  |  |  |
|                                           |                                              |  |  |  |  |  |  |  |  |  |
|                                           |                                              |  |  |  |  |  |  |  |  |  |
|                                           | UREMENTS REFERENCED TO GROUND SURFACE        |  |  |  |  |  |  |  |  |  |
| * Att DEPTH MEAS                          | UKEMENIS KEPERCENCIAL IV GROUND SUIGING      |  |  |  |  |  |  |  |  |  |

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

R-96%

p2 of 3 OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL CLIENT: US AWE WELL #: MW 13-7 ENGINEERING-SCIENCE, INC. DATE: 1-24-94 125 TR 0,0 PIN DESCRIPTION (PRON BORDEG LOG) | DEPTH TG 3.0 TBS 4.0 **TSP** 5.0 TSC 40 80 POW BEDROCK BOD • NOT TO SCALE 02-16-94 08:22AM P003 #32 E=95%

|                   |                | om r             |                                         |       | PARSONS ENGINEERING SCIENCE, INC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              | RING/                                            |         | Sheet <u>* 1</u> of 1 *  |
|-------------------|----------------|------------------|-----------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------|---------|--------------------------|
| Contra<br>Driller |                | SJB, Ir          |                                         | -     | DRILLING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | LL NO.                                           |         | SB-13-11/MW-13-11        |
| Inspec            |                | John V<br>E. Ash |                                         | -     | DDOIECT NAME: Concor Amore Donat CEAD 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              | ation Des                                        |         |                          |
| Rig Ty            |                | Mobile           | *************************************** | -     | PROJECT NAME: Seneca Army Depot-SEAD-13 PROJECT NUMBER: 736994                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <del> </del> | SEE SITI                                         | E PLA   | AN                       |
| ling 1            | pc.            | WIOOIIC          |                                         | -     | 1 ROJECT NUMBER: 730994                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -            |                                                  |         |                          |
| GRO               | UNDWA          | TER OF           | BSERVAT                                 | TIONS |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Locs         | tion Plan                                        | П       |                          |
| Water             | T              |                  | T                                       |       | Weather: Cloudy-70 ' F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Loc.         | tion I mi                                        | -11     |                          |
| Level             | Dry            | Dry              | Dry                                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
| Date              | 8/17/01        |                  |                                         |       | Date/Time Start: 8/16/01-0925                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              | S                                                | EE SI   | ITE PLAN                 |
| Time              | 0825           | 1010             | 1130                                    |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | İ            |                                                  |         |                          |
| Meas.             |                |                  |                                         |       | Date/Time Finish: 8/16/01-1310                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                                                  |         |                          |
| From              | TOC            | TOC              | TOC                                     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
| Sampl             |                | SPT              | %                                       | PID   | FIELD IDENTIFICATION OF MATERIAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SC           | HEMAT                                            | IC      | COMMENTS                 |
| Depth             |                | - /-             | Rec.                                    | (ppm) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2.51         | stick-up                                         |         |                          |
| 0                 | 134016         | 5/9              | 50                                      | 696   | (0'-2') Brown to light Grey, silt with clay, trace of fine sand and fine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                                                  |         | Grout 0-1'               |
| <u> </u>          | (0-2)          | 16/15            |                                         |       | gravel (weathered shale), roots, dryML/SC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                                                  |         |                          |
| 1                 |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | l L                                              |         | 1'                       |
|                   |                | 14/16            | 50                                      | 100   | (24.4) 7.4.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              | ←                                                |         | 2" PVC Riser             |
| 2                 |                | 14/16            |                                         | 175   | (2'-4') Light Brown, fine sand with silt, fine to medium gravel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
| 3                 |                | 21/21            |                                         |       | (weathered shale), drySM/SC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              | i                                                |         | Bentonite Pellets 1-3.5' |
| <u> </u>          |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
| 4                 |                | 9/16             | 50                                      | 190   | (ALC) Property after the design of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon |              | _                                                |         | 3.5'                     |
|                   |                | 22/28            |                                         | 190   | (4'-6') Brown, silt with clay, fine to medium gravel (weathered shale),                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                                                  |         | 4 101                    |
| 5                 |                | 22/20            |                                         |       | trace of fine sand, dryML/SC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              | <b>  </b>                                        |         | 4.5'                     |
|                   |                | <del> </del>     |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | <b>  </b>                                        |         | F"( 1 1 (#A)             |
| 6                 |                | 53/60            | 80                                      | 91    | (6'-8') Same as above ML/SC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              | <del></del>                                      | ₹       | ` '                      |
| ۱                 |                | 67/              | - 00                                    | 71    | (0-6) Same as above WIL/SC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              | <del></del>                                      |         | pack-3.5-15'             |
| 7                 |                | 100/.4           |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | <del>                                     </del> |         | 0.010 Slot Sch. 40 PVC   |
|                   |                | 100,             |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | $\vdash$                                         |         | Screen-4.5'-14.5'        |
| 8                 | 134017         | 13/19            | 80                                      | 264   | (8'-10') Light Grey, fine to medium sand, fine to course gravel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | <b>—</b> —                                       |         |                          |
|                   | (8-10)         | 24/37            |                                         |       | (weathered shale), silt, drySM/SC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                                                  |         |                          |
| 9                 |                |                  |                                         |       | ( and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of  |              | $\vdash$                                         |         |                          |
|                   |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | <del></del>                                      |         |                          |
| 10                |                | 13/37            | 80                                      | 106   | (10'-11.8) Same as aboveSM/SC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                                                  |         |                          |
|                   |                | 100/.4           |                                         |       | Refusal at 11.8' bgs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              | -                                                |         |                          |
| 11                |                |                  |                                         |       | Note: Drilled to 15' bgs with HSAs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                                                  |         |                          |
|                   |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  | ı       | •                        |
| 12                |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
|                   |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  | - 1     |                          |
| 13                |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
| 1.4               |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
| 14                |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
| 15                |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         | 14.5'                    |
| 13                |                |                  |                                         |       | Torrelated will be in a 4.15 G at 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                                                  |         | 15' Sump                 |
|                   |                |                  |                                         |       | Terminated soil boring at 15 feet bgs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                                                  |         | (14.5-15')               |
|                   |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         | •                        |
|                   | -              |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
|                   |                |                  |                                         | ****  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
|                   |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
|                   |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •            |                                                  |         |                          |
|                   |                |                  |                                         | -     | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                                                  | J       |                          |
|                   |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
|                   |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |
|                   |                |                  |                                         |       | COMMENTS:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                                                  |         |                          |
| \$                | SAMPLING       | G METHO          | OD                                      |       | Collected soil samples 134016 (0'-2') bgs and 134017 (8'-10') bgs for B/N/A SVOCs, TAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Metale       | Cvanide ••                                       | d Nites | ate analysis             |
| s                 | S = SPLIT SPOO | N                |                                         |       | Additionally, collected soil samples 134017 (8'-10') bgs MS & MSD for same analysis menti                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                                                  |         |                          |
| A                 | - AUGER CUT    | TINGS            |                                         |       | Installed 2-inch monitoring well.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | GOO          |                                                  |         |                          |
|                   |                |                  |                                         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                  |         |                          |

# OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

PROTECTIVE RISER COMPLETION

| PARSONS ENGINEERING SC                             | IENCE, INC. C | LIENT:      | 4COB       |                 |            | WELL#:     | 14-13-11   |
|----------------------------------------------------|---------------|-------------|------------|-----------------|------------|------------|------------|
| PROJECT:                                           | OSWMA         |             |            | PF              | ROJECT NO: | 13699      |            |
| LOCATION:                                          | SEAD 13       |             |            | Γ               | NSPECTOR:  | 68         | ASHA       |
|                                                    |               |             |            | СН              | ECKED BY:  | EN AN      | Lotan      |
| DRILLING CONTRACTOR:                               | STB Z.        | vc.         |            | Po              | OW DEPTH:  | 15'        |            |
| DRILLER:                                           | John Wa       | rs of       | I)         | ISTALLATION     | STARTED:   | 8116/01    | 100925     |
| DRILLING COMPLETED:                                | 8/16/01       |             | INST       | ALLATION CO     | OMPLETED:  |            | e /3/0     |
| BORING DEPTH:                                      | 15'           | ···         | SURF       | ACE COMPLET     | TON DATE:  | 8117101    |            |
| DRILLING METHOD(S):                                | HSA           |             | COMPLETION | ON CONTRACT     | ror/crew:  | STB        | Inc.       |
| BORING DIAMETER(S):                                | 8-12-1        | W           | BEDR       | OCK CONFIRM     | MED (Y/N?) |            |            |
| ASSOCIATED SWMU/AOC:                               | 13            |             | ESTIMATE   | O GROUND E      | LEVATION:  |            |            |
| PROTECTIVE SURFACE CASI                            | NG:           |             |            |                 |            |            |            |
|                                                    | DIAMETER: 4   | yy"Stee     | LENGTH:    | 3.5'            | _          | TOR:       |            |
| RISER:                                             |               |             |            |                 |            |            |            |
| TOC:                                               | TYPE:         | PVC 40      | DIAMETER:  |                 | LENGTH:    |            |            |
| SCREEN:                                            |               |             |            |                 |            |            | SLOT       |
| TSC: 9.5'                                          | TYPE:         | Prc40       | DIAMETER:  | 2 ''            | LENGTH:    | 10         | SIZE: O.O/ |
| POINT OF WELL: (SILT SUMP)<br>YPE: <u>PVC Poin</u> | # BSC:        | 14.5'       | POW:       | 15'             |            |            |            |
| GROUT:                                             | Wound         | TYPE:       | Ce ment-B  | est.<br>LENGTH: | -          | 1.0        |            |
| SEAL: TBS:                                         | 10'           | TYPE:/      | Bont.palle | LENGTH:         | _          | 2.5'       |            |
| SAND PACK: TSP:                                    | 3.5'          | TYPE:       | 40         | LENGTH:         | _          | 11.5       | ,          |
| SURFACE COLLAR:  TYPE:                             | radius: 2     | ×2'         | THICKN     | ESS CENTER:     |            | THICKNES   | S EDGE:    |
| CENTRALIZER DEPTHS                                 |               |             |            |                 |            |            |            |
| DEPTH 1:                                           | DEPTH 2:      |             | DEPTH 3:   |                 | -          | DEPTH 4:   |            |
| COMMENTS:                                          |               |             |            |                 |            |            |            |
|                                                    |               |             |            |                 |            |            |            |
|                                                    |               | *           |            |                 |            |            |            |
|                                                    |               |             |            |                 |            |            |            |
|                                                    |               |             |            |                 |            |            |            |
|                                                    | * A           | LL DEPTH ME | ASUREMENTS | REFERENCEI      | TO GROU    | ND SURFACE |            |
|                                                    |               |             |            |                 |            |            |            |

# OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ACOE WELL #: MW-13-11 PARSONS ENGINEERING SCIENCE, INC. CLIENT: DATE: 81/8/01 DEPTH **ELEV** -TPC--TOC-DESCRIPTION PIN-(FROM BORING LOG) DEPTH SCHEMATIC TG See Boriglag SB-13-11. TBS-TSP-- TSC-4.51 BSC-POW-- BOV-15.0 **BEDROCK** BOD:

| Contra            | etor:             | SJB, Ir     | ne                                             |                                                  | PARSONS ENGINEERING SCIENCE, INC. DRILLING RECORD                                       | BORING/<br>WELL NO.                 | Sheet * 1 of 1 *<br>SB-13-12/MW-13-12 |  |  |  |
|-------------------|-------------------|-------------|------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------|--|--|--|
| Driller           |                   | John W      |                                                | ****                                             | DRILLING RECORD                                                                         |                                     |                                       |  |  |  |
| Inspec            |                   | E. Ash      |                                                | _                                                | PROJECT NAME: Seneca Army Depot-SEAD-13                                                 | Location Description: SEE SITE PLAN |                                       |  |  |  |
| Rig Ty            |                   | Mobile      |                                                | ***                                              | PROJECT NUMBER: 736994                                                                  | SEE SHE PL                          | AN                                    |  |  |  |
| ing Ay            | pc.               | Woone       | <del>'</del>                                   |                                                  | TROJECT NUMBER. 730334                                                                  |                                     |                                       |  |  |  |
| GRO               | UNDWA             | TER OF      | BSERVA'                                        | TIONS                                            |                                                                                         | Location Plan                       |                                       |  |  |  |
| Water             | Ī                 | Ī           | T                                              | T T                                              | Weather: Sunny-70'F                                                                     | Document Time                       |                                       |  |  |  |
| Level             | Dry               | Dry         | 9.45                                           |                                                  | Tronsite Commy 102                                                                      | 1                                   |                                       |  |  |  |
| Date              | 8/17/01           | <del></del> |                                                | <del>                                     </del> | Date/Time Start: 8/15/01-1000                                                           | SEE S                               | SITE PLAN                             |  |  |  |
| Time              | 0830              | 1020        |                                                | +                                                |                                                                                         | -                                   | HILD I LICHT                          |  |  |  |
| Meas.             |                   |             |                                                | †                                                | Date/Time Finish: 8/15/01-1306                                                          |                                     |                                       |  |  |  |
| From              | тос               | TOC         | TOC                                            |                                                  |                                                                                         | †                                   |                                       |  |  |  |
| Sampl             | Sample            | SPT         | %                                              | PID                                              | FIELD IDENTIFICATION OF MATERIAL                                                        | SCHEMATIC                           | COMMENTS                              |  |  |  |
| Depth             |                   |             | Rec.                                           | (ppm)                                            |                                                                                         | 2.5'-stick-up                       |                                       |  |  |  |
| 0                 | 134018            | 2/3         | 80                                             | 157                                              | (0'-2') Brown, clay with silt, trace of fine sand, roots, dry to moist.                 |                                     | Grout 0-1'                            |  |  |  |
|                   | (0-2)             | 5/6         |                                                |                                                  | CL/ML                                                                                   |                                     | 2" PVC Riser                          |  |  |  |
| 1                 |                   |             |                                                | <u> </u>                                         |                                                                                         |                                     | <u></u> 1'                            |  |  |  |
|                   |                   |             |                                                |                                                  |                                                                                         |                                     | Bentonite Pellets 1-1.75'             |  |  |  |
| 2                 |                   | 8/21        | 50                                             | 74                                               | (2'-3.5') Brown to light Brown, clay with silt, trace of fine sand, dry.                |                                     | 1.75'                                 |  |  |  |
|                   |                   | 18/16       | <u> </u>                                       |                                                  | CL/ML                                                                                   |                                     | 2'                                    |  |  |  |
| 3                 |                   |             |                                                |                                                  |                                                                                         |                                     | Filtered sand (#0)                    |  |  |  |
|                   |                   |             |                                                |                                                  | (3.5'-4') Light Grey to light Brown, silt with clay, trace of fine sand                 |                                     | pack-1.75-11.3'                       |  |  |  |
| 4                 |                   | 16/29       |                                                | 90.5                                             | and fine to medium gravel (weathered shale), dry ML/SC                                  |                                     |                                       |  |  |  |
|                   |                   | 35/37       |                                                |                                                  | (4'-6) Grey to Light Grey, silt with clay, trace of fine sand, fine to                  |                                     |                                       |  |  |  |
| 5                 |                   |             |                                                |                                                  | medium gravel (weathered shale), dry ML/SC                                              |                                     |                                       |  |  |  |
|                   |                   |             |                                                |                                                  |                                                                                         |                                     |                                       |  |  |  |
| 6                 | 134019            |             |                                                | 100                                              | (6'-8') Brown to light Grey, silt, trace of clay and fine sand, fine to                 |                                     |                                       |  |  |  |
|                   | (6-8)             | 67/67       |                                                |                                                  | medium gravel (weathered shale), dry ML/SC                                              |                                     | 0.010 Slot Sch. 40 PVC                |  |  |  |
| 7                 |                   |             |                                                |                                                  |                                                                                         |                                     | Screen-2-9.3'                         |  |  |  |
|                   |                   |             |                                                |                                                  |                                                                                         |                                     |                                       |  |  |  |
| 8                 |                   | 16/32       |                                                | 25                                               | (8'-10') Same as above, except for soil Grey in color.                                  |                                     |                                       |  |  |  |
|                   |                   | 46/66       | ļ <u>.                                    </u> |                                                  |                                                                                         |                                     |                                       |  |  |  |
| 9                 |                   |             |                                                | <u> </u>                                         |                                                                                         |                                     | 9.3'                                  |  |  |  |
|                   |                   | 25/50       |                                                |                                                  |                                                                                         |                                     | Sump                                  |  |  |  |
| 10                |                   | 36/58       |                                                | 82.2                                             | (10'-11.3') Same as above. Refusal at 11.3' bgs. Weathered shale at                     |                                     | 10' (9.3'-10')                        |  |  |  |
|                   |                   | 100/.3      |                                                |                                                  | tip of spoon.                                                                           | ]                                   | ]                                     |  |  |  |
| 11                |                   |             |                                                | igwdown                                          |                                                                                         |                                     |                                       |  |  |  |
|                   |                   |             |                                                |                                                  |                                                                                         |                                     | 11.3'                                 |  |  |  |
| 12                |                   |             |                                                | <u> </u>                                         | Terminated soil boring at 11.3 feet bgs.                                                |                                     |                                       |  |  |  |
| $\longrightarrow$ |                   |             |                                                | <u> </u>                                         |                                                                                         |                                     |                                       |  |  |  |
| $\longrightarrow$ |                   |             |                                                |                                                  |                                                                                         |                                     |                                       |  |  |  |
| $\longrightarrow$ |                   |             |                                                | <b>  </b>                                        |                                                                                         |                                     |                                       |  |  |  |
| $\longrightarrow$ |                   |             |                                                | <b></b>                                          |                                                                                         |                                     |                                       |  |  |  |
| $\longrightarrow$ |                   |             |                                                |                                                  |                                                                                         |                                     |                                       |  |  |  |
| $\longrightarrow$ |                   |             |                                                |                                                  |                                                                                         |                                     |                                       |  |  |  |
| $\dashv$          | <u> </u>          |             | <u> </u>                                       | <u> </u>                                         |                                                                                         |                                     |                                       |  |  |  |
|                   |                   |             |                                                | <b></b>                                          |                                                                                         |                                     |                                       |  |  |  |
|                   | $\longrightarrow$ |             |                                                | $\vdash \vdash \vdash$                           |                                                                                         |                                     |                                       |  |  |  |
|                   | $\longrightarrow$ |             |                                                | <u> </u>                                         |                                                                                         |                                     |                                       |  |  |  |
|                   |                   |             |                                                | <b></b>                                          |                                                                                         |                                     |                                       |  |  |  |
| $\longrightarrow$ | $\longrightarrow$ |             |                                                | $\vdash \vdash \vdash$                           |                                                                                         |                                     |                                       |  |  |  |
|                   |                   |             |                                                |                                                  |                                                                                         |                                     |                                       |  |  |  |
|                   |                   |             | <u> </u>                                       |                                                  |                                                                                         |                                     |                                       |  |  |  |
|                   |                   |             |                                                | <u> </u>                                         |                                                                                         |                                     |                                       |  |  |  |
|                   |                   | 1           |                                                |                                                  |                                                                                         |                                     |                                       |  |  |  |
|                   |                   |             |                                                |                                                  | COMMENTS:                                                                               |                                     |                                       |  |  |  |
|                   | SAMPLING          |             | )D                                             |                                                  | Collected soil samples 134018 (0'-2') bgs and 134019 (6'-8') bgs for B/N/A SVOCs, TAL M | Metals, Cyanide, and Nitra          | te analysis.                          |  |  |  |
|                   | SS = SPLIT SPOON  |             |                                                |                                                  | Installed 2-inch monitoring well.                                                       |                                     |                                       |  |  |  |
|                   | A - AUGER CUTT    | INGS        |                                                |                                                  |                                                                                         |                                     |                                       |  |  |  |
| (                 | C = CORED         |             |                                                |                                                  |                                                                                         |                                     |                                       |  |  |  |

# OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

PROTECTIVE RISER COMPLETION

| PARSONS ENGINEERING SCIENCE, INC.                     | CLIENT:         | ICOE         |              |            | WELL#: M     | 4-13-12 |
|-------------------------------------------------------|-----------------|--------------|--------------|------------|--------------|---------|
| PROJECT: /OSWMU                                       |                 |              | PF           | ROJECT NO: |              |         |
| LOCATION: SBAD 13                                     |                 |              |              | NSPECTOR:  | ES A         |         |
|                                                       |                 |              | СН           | ECKED BY:  | AJ A         | sate    |
| DRILLING CONTRACTOR: STB. Z.                          | 2-1_            |              | Po           | OW DEPTH:  | 11.3         | } ′     |
| DRILLER: John W                                       | reno            | n            | STALLATION   | STARTED:   |              |         |
| DRILLING COMPLETED: 8/15/0                            |                 | INST.        | ALLATION CO  | OMPLETED:  |              | - 1306  |
| BORING DEPTH: //. 3                                   | ,               | SURF         | ACE COMPLET  | TION DATE: | <i>r</i> : 4 | 1       |
| DRILLING METHOD(S): #SA                               |                 | COMPLETIO    | ON CONTRACT  | TOR/CREW:  | parameter.   | Parc    |
| BORING DIAMETER(S): タゼー                               | N               | BEDR         | OCK CONFIRM  | MED (Y/N?) |              |         |
| ASSOCIATED SWMU/AOC: /3                               |                 | ESTIMATEI    | O GROUND EI  | LEVATION:  |              |         |
| PROTECTIVE SURFACE CASING:                            |                 |              |              |            |              |         |
| DIAMETER:                                             | 4"+4"Steel      | LENGTH:      | 3.5          | _          | TOR:         |         |
| RISER:                                                |                 |              |              |            |              |         |
| TOC: TYPE:                                            | PVC 40          | DIAMETER:    | 2"           | LENGTH:    | -            |         |
| SCREEN:                                               |                 |              |              |            | (            | SLOT    |
| TSC: 2 TYPE:                                          | AVC 40          | DIAMETER:    | 2            | LENGTH:    | 7.3          | SIZE:   |
| POINT OF WELL: (SILT SUMP)  YPE: <u>IVC Paid</u> BSC: | 9.3             | POW:         | 10.0         |            |              |         |
| GROUT: TG: Gland                                      | ТҮРЕ: 4         | e med-kon    | LENGTH:      |            | 1.0          |         |
| SEAL: TBS: // O                                       | TYPE: 🙇         | last, pellet | LENGTH:      |            | 0-75'        |         |
| SAND PACK: TSP: 675'                                  | TYPE:           | #0           | LENGTH:      | -          | 9. 35        |         |
| SURFACE COLLAR:  TYPE: RADIUS:                        | 2'x2'           | THICKN       | IESS CENTER: |            | THICKNESS    | EDGE:   |
| CENTRALIZER DEPTHS DEPTH 1: DEPTH 2:                  |                 | DEPTH 3:     |              |            | DEPTH 4:     |         |
| COMMENTS:                                             | * ALL DEPTH MEA | .SUREMENTS   | REFERENCEL   | ) TO GROU  | ND SURFACE   |         |

SEE PAGE 2 FOR SCHEMATIC

## OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ACOE WELL #: MW-13-12 PARSONS ENGINEERING SCIENCE, INC. CLIENT: DATE: 8/15/01 DEPTH **ELEV** -TPC--TOC-**DESCRIPTION** PIN-(FROM BORING LOG) DEPTH SCHEMATIC fee Boringley SB-13-12 TG - TBS-- TSP -2.0 - TSC-BSC-POW-BOV-**BEDROCK** BOD.

| 1             |         |                 |         |          | PARSONS ENGINEERING SCIENCE, INC.                                    | BO                    | RING               | /                                           | Sheet <u># 1 of 1 #</u>               |
|---------------|---------|-----------------|---------|----------|----------------------------------------------------------------------|-----------------------|--------------------|---------------------------------------------|---------------------------------------|
| Contra        |         | SJB, Inc        |         | _        | DRILLING RECORD                                                      | WE                    |                    |                                             | SB-13-13/MW-13-13                     |
| Driller       |         | John Wa         |         | -        |                                                                      | Location Description: |                    |                                             |                                       |
| Inspec        |         | E. Asht         | on      | _        | PROJECT NAME: Seneca Army Depot-SEAD-13                              |                       | SEE SI             | TE PL                                       | AN                                    |
| Rig Ty        | pe:     | Mobile          |         | -        | PROJECT NUMBER 736994                                                | +                     |                    |                                             |                                       |
| GRO           | DUNDWA  | ATER OF         | BSERVAT | IONS     |                                                                      | Loc                   | ation Pl           | an                                          | · · · · · · · · · · · · · · · · · · · |
| Water         |         | Ī               |         | <u> </u> | Weather: Sunny-70'F                                                  | Loc.                  | ition 11           | <u>                                    </u> |                                       |
| Level         | 5.80'   | 8.10'           | 9.15    |          | -                                                                    | 1                     |                    |                                             |                                       |
| Date          | 8/17/01 | 8/22/01         | 9/04/01 |          | Date/Time Start: 8/15/01-1420                                        | _                     |                    | SEE S                                       | ITE PLAN                              |
| Time          | 0815    | 0955            | 1121    |          |                                                                      |                       |                    |                                             |                                       |
| Meas.<br>From | TOC     | TOC             | TOC     |          | Date/Time Finish: 8/15/01-1741                                       | _                     |                    |                                             |                                       |
| Sampl         | Sample  |                 | %       | PID      | FIELD IDENTIFICATION OF MATERIAL                                     | S.C                   | TTTTT A A          | TIC                                         | COMMENSES                             |
| Depth         |         |                 | Rec.    | (ppm)    | FIELD IDENTIFICATION OF MATERIAL                                     | 1                     | CHEMA<br>-stick-up | TIC                                         | COMMENTS                              |
| 0             | 134012  | 5/9             | 50      | 403      | (0'-2') Brown, silt with clay, trace of fine sand, roots, dryML/SC   | 1 2.0                 | T I                |                                             | Grout 0-1'                            |
|               | (0-2)   | 16/15           |         |          |                                                                      |                       |                    |                                             |                                       |
| 1             | 134020  |                 |         |          |                                                                      |                       |                    |                                             | 1'                                    |
|               | (0-2)   | 0/14            |         |          |                                                                      |                       | <                  |                                             | 2" PVC Riser                          |
| 2             |         | 2/14<br>16/21   | 80      | 46       | (2'-4') Same as above ML/SC                                          |                       |                    |                                             |                                       |
| 3             |         | 10/21           |         |          |                                                                      |                       |                    |                                             | Bentonite Pellets 1-3.5'              |
|               |         |                 |         |          |                                                                      |                       |                    |                                             | 3.5'                                  |
| 4             |         | 3/9             | 90      | 43.7     | (4'-6') Brown, silt, trace of clay and fine sand, dry SC/ML          |                       | 1 1                |                                             | 0.0                                   |
|               |         | 16/22           |         |          | , , , , , , , , , , , , , , , , , , , ,                              |                       |                    |                                             | 4.5'                                  |
| 5             |         |                 |         |          |                                                                      |                       |                    |                                             |                                       |
|               |         | 1/50            |         |          |                                                                      |                       |                    | <                                           | l ' '                                 |
| 6             |         | 4/53<br>60/67   | 90      | 20       | (6'-8') Same as above SC/ML                                          |                       |                    |                                             | pack-3.5-15'                          |
| 7             |         | 60/67           |         |          |                                                                      |                       | L \$               |                                             | 0.010 Slot Sch. 40 PVC                |
|               |         |                 |         |          |                                                                      |                       |                    |                                             | Screen-4.5'-14.5'                     |
| 8             | 134013  | 5/13            | 80      | 22       | (8'-10') Brown to Grey, clay with silt, trace of fine sand and fine, |                       |                    |                                             |                                       |
|               | (8-10)  | 14/24           |         |          | gravel,dryCL/ML                                                      |                       |                    |                                             |                                       |
| 9             |         |                 |         |          |                                                                      |                       |                    |                                             |                                       |
| 10            |         | 10/05           | 50      |          |                                                                      |                       |                    |                                             |                                       |
| 10            |         | 13/37<br>100/.3 | 50      | 21       | (10'-11.5') Grey, clay with silt, fine to course gravel              |                       |                    |                                             |                                       |
| 11            |         | 1007.3          |         |          | (weathered shale), wetCL/ML<br>Refusal at 11.5' bgs.                 |                       |                    |                                             |                                       |
|               |         |                 |         |          | Note: Drilled to 15' bgs with HSAs.                                  |                       |                    |                                             |                                       |
| 12            |         |                 |         |          |                                                                      |                       |                    |                                             |                                       |
|               |         |                 |         |          |                                                                      |                       |                    |                                             |                                       |
| 13            |         |                 |         |          |                                                                      |                       |                    |                                             |                                       |
| 14            |         |                 |         |          |                                                                      |                       |                    |                                             |                                       |
| 14            |         |                 |         |          |                                                                      |                       |                    |                                             | 14.5'                                 |
| 15            |         |                 |         |          |                                                                      |                       |                    |                                             | 14.5<br>15' Sump                      |
|               |         |                 |         |          | Terminated soil boring at 15 feet bgs.                               | ļ .                   | l1                 |                                             | (14.5-15')                            |
|               |         |                 |         |          |                                                                      | Ì                     |                    |                                             | ,                                     |
|               |         |                 |         |          |                                                                      | 1                     |                    |                                             |                                       |
|               |         |                 |         |          |                                                                      |                       |                    |                                             |                                       |
|               |         |                 |         |          |                                                                      |                       |                    |                                             |                                       |
|               |         |                 |         |          |                                                                      |                       |                    |                                             |                                       |
|               |         |                 |         |          |                                                                      |                       |                    |                                             |                                       |
|               |         |                 |         |          |                                                                      |                       |                    |                                             |                                       |
|               |         |                 |         |          |                                                                      | <u>L</u> _            |                    |                                             |                                       |
|               |         |                 |         |          | COMMENTS:                                                            |                       |                    |                                             |                                       |

SAMPLING METHOD

SS = SPLIT SPOON

A = AUGER CUTTINGS

C = CORED

Collected soil samples 134012 (0'-2') bgs and 134013 (8'-10') bgs for B/N/A SVOCs. TAL Metals. Cyanide, and Nitrate analysis. Also, collected duplicate soil sample 134020 (0'-2') bgs for same parameters mentioned above. Installed 2-inch monitoring well. In field notebook as SB/MW13-9 for work during August and September 2001

# OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION



|                            |              |              |             |              | 2011       |                    | 17         |
|----------------------------|--------------|--------------|-------------|--------------|------------|--------------------|------------|
| PARSONS ENGINEERING SO     | CIENCE, INC. | CLIENT:      | ACUE        |              |            | WELL#: M           | W-13-X     |
| PROJECT: 10                | SWMU         |              |             | P            | ROJECT NO: |                    |            |
| LOCATION:                  | EAD13        |              |             | I            | NSPECTOR:  | Ed Ash             | ta         |
|                            |              |              |             | CH           | ECKED BY:  | Ed A               | 16th       |
| DRILLING CONTRACTOR:       | SJB, Z       | NC.          |             | P            | OW DEPTH:  | 15'                |            |
| DRILLER:                   | John h       | 1410/20.     | IN          | STALLATION   | STARTED:   | 8/15               | 10/0/420   |
| DRILLING COMPLETED:        | 8115/01      | <i>,</i>     | INST        | ALLATION C   | OMPLETED:  | A 1                |            |
| BORING DEPTH:              |              |              | SURF        | ACE COMPLE   | TION DATE: | 81171              | 01         |
| DRILLING METHOD(S):        | <u>HSA</u>   |              | COMPLETION  | ON CONTRAC   | TOR/CREW:  | SUB                |            |
| BORING DIAMETER(S):        | 8/2          |              | BEDR        | OCK CONFIR   | MED (Y/N?) | ·                  |            |
| ASSOCIATED SWMU/AOC:       | /3           |              | ESTIMATE    | D GROUND E   | LEVATION:  |                    |            |
| PROTECTIVE SURFACE CAS     | ING:         |              |             |              |            |                    |            |
|                            | DIAMETER:    | 9"x 9" stee  | LENGTH:     | 3.5          | _          | TOR:               |            |
| RISER:                     |              | A            |             | , (          |            |                    |            |
| TOC:                       | TYPE:        | PVC 40       | DIAMETER:   | 2            | LENGTH:    |                    |            |
| SCREEN:                    |              |              |             | 13           |            |                    | SLOT "     |
| TSC: 4.5                   | TYPE:        | PVC40        | DIAMETER:   | 2            | LENGTH:    | 10                 | SIZE: Ø.0/ |
| POINT OF WELL: (SILT SUMP) | )            |              |             |              |            |                    |            |
| YPE: IVE PULL              | 4            | 14.5         | POW:        | 15           |            |                    |            |
| GROUT:                     |              |              |             |              |            |                    |            |
| TG:                        | Crourel      | TYPE: 5      | Ce mut-Be   | LENGTH:      |            | 1.0                |            |
| SEAL: TBS:                 | 1.0          | TYPE:        | Bost, pelle | LENGTH:      |            | 2.5                |            |
| SAND PACK: TSP:            | 3 5"         | TYPE:        | # 0         | LENGTH:      |            | 11.5               |            |
| SURFACE COLLAR:            |              |              |             | ELNOTTI.     |            |                    |            |
| TYPE:                      | RADIUS:      | 2'+2'        | THEORY      | TECC OF ITED | , (        | 777 Y OV 12 PO 0 0 |            |
|                            | . KADIO3     |              | IHICK       | VESS CENTER  | :          | THICKNESS          | EDGE:      |
| CENTRALIZER DEPTHS         | DEDTILO      |              |             |              |            |                    |            |
| DEPTH 1:                   | DEP1H 2:_    |              | DEPTH 3:    |              | _          | DEPTH 4:           |            |
| COMMENTS:                  |              |              |             |              |            |                    |            |
|                            |              |              |             |              |            |                    |            |
|                            |              |              |             |              |            |                    |            |
|                            |              |              |             |              |            |                    |            |
|                            |              |              |             |              |            |                    |            |
|                            | *            | ALL DEPTH ME | ASUREMENTS  | REFERENCE    | D TO GROU  | IND SURFACE        |            |
| SEE PAGE 2 FOR SCHEMA?     | TIC          |              |             |              |            |                    | }          |

## OVERBURDEN MONITORING WELL

15,0

BOV-

BOD.

PROTECTIVE RISER INSTALLATION DETAIL WELL#: MW-13-\$3 ACUE PARSONS ENGINEERING SCIENCE, INC. CLIENT: DATE: 8/15/0/ DEPTH **ELEV** -TPC--TOC-DESCRIPTION PIN-(FROM BORING LOG) DEPTH SCHEMATIC TG See Boring Log SB-13-9 TBS-TSP-TSC-BSC POW-

**BEDROCK** 

| Contra            | actor:                                       | SJB, Inc      |                                                  |               | PARSONS ENGINEERING SCIENCE, INC. DRILLING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | BORING/ Sheet # 1<br>WELL NO. SB-13-14/MW-13- |               |            |                                    |  |  |
|-------------------|----------------------------------------------|---------------|--------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|------------|------------------------------------|--|--|
| Driller           |                                              | John Wa       |                                                  | -             | DRIDDING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            |                                    |  |  |
| Inspec            |                                              | E. Ashto      |                                                  | -             | PROJECT NAME: Seneca Army Depot-SEAD-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                               | tion Des      |            |                                    |  |  |
| Rig Ty            |                                              | Mobile Mobile | )]]                                              | -             | PROJECT NAME:         Seneca Army Depot-SEAD-13           PROJECT NUMBER         736994                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | SEE SITE PLAN                                 |               |            |                                    |  |  |
| 1s . ,            | pc.                                          | MIOGIC        | -                                                | -             | TROJECT NUMBER 730774                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | +                                             |               |            |                                    |  |  |
| GR(               | DUNDW/                                       | ATER OB       | SERVAT                                           | TONS          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Loca                                          | ition Pla     | n          |                                    |  |  |
| Water             | T                                            | }             | T                                                | Ī             | Weather: Cloudy-70'F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                               |               | <u></u>    |                                    |  |  |
| Level             | Dry                                          | Dry           | Dry                                              |               | State of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state | 7                                             |               |            |                                    |  |  |
| Date              | 8/17/01                                      |               |                                                  |               | Date/Time Start: 8/16/01-1404                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               | 5             | SEE S      | ITE PLAN                           |  |  |
| Time              | 0820                                         | 1000          | 1136                                             |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                                             | -             | ,          |                                    |  |  |
| Meas.             |                                              |               |                                                  |               | Date/Time Finish: 8/16/01-1711                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                               |               |            |                                    |  |  |
| From              | TOC                                          | TOC           | TOC                                              |               | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1                                             |               |            |                                    |  |  |
| Sampl             | Sample                                       | SPT           | %                                                | PID           | FIELD IDENTIFICATION OF MATERIAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SC                                            | HEMAT         | TIC        | COMMENTS                           |  |  |
| Depth             | I.D.                                         |               | Rec.                                             | (ppm)         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               | stick-up      |            |                                    |  |  |
| 0                 | 134014                                       | 7/17          | 50                                               | 383           | (0'-2') Brown, silt, fine sand, trace of clay, roots, dryML/SC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                               |               |            | Grout 0-1'                         |  |  |
|                   | (0-2)                                        | 10/16         |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            |                                    |  |  |
| 1                 |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            | 1'                                 |  |  |
|                   |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            | 2" PVC Riser                       |  |  |
| 2                 | '                                            | 100/.4        | 20                                               | 320           | (2'-4') Same as above. Encountered refusal at 2.4 ' bgs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                               |               |            |                                    |  |  |
|                   | <u>                                     </u> | <u> </u>      |                                                  |               | Drilled with HSAs to 4' bgs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                               |               |            | Bentonite Pellets 1-3.5'           |  |  |
| 3                 | <u> </u>                                     | '             | <u> </u>                                         |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            |                                    |  |  |
| '                 | <u> </u> '                                   | <u> </u>      | <u> </u>                                         | <u> </u>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               | l L           |            | 3.5'                               |  |  |
| 4                 | <u> </u>                                     | 21/41         | 50                                               | 55            | (4'-5.4') Brown, silt, fine to medium gravel (weathered shale), fine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                               |               |            |                                    |  |  |
|                   |                                              | 100/.4        |                                                  | <u> </u>      | sand, trace of clay, dryML/SC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |               |            | 4.5'                               |  |  |
| 5                 | <b> </b>                                     | <b></b>       | <b></b>                                          | <u> </u>      | Refusal at 5.4' bgs. Drilled with HSAs to 6' bgs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |               |            |                                    |  |  |
| <del></del> '     | <b> </b>                                     | 10/26         |                                                  | 1 - 1         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               | Щ             | <          | Filtered sand (#0)                 |  |  |
| 6                 | <b></b>                                      | 10/26         | 80                                               | 50.1          | (6'-8') Brown to light Grey, silt, fine sand, clay, fine to medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |               | 1          | pack-3.5-15'                       |  |  |
| 7                 |                                              | 66/82         | <b></b>                                          | <b> </b>      | gravel (weathered shale), dryML/SC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |               |            | 0.010 Slot Sch. 40 PVC             |  |  |
|                   | <b></b>                                      |               | <b> </b>                                         | <b></b>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               | <b></b>       |            | Screen-4.5'-14.5'                  |  |  |
| 8                 | <del></del>                                  | 19/           | 10                                               | 80            | (OI ON Camp on shows MI /CC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |               |            |                                    |  |  |
|                   | <del></del>                                  | 100/.4        | 10                                               | F-00          | (8'-9') Same as aboveML/SC<br>Refusal at 9' bgs. Drilled with HSAs to 10' bgs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                               | <b>—</b>      |            |                                    |  |  |
| 9                 | <del></del>                                  | 1007.7        | <del>                                     </del> | <del>  </del> | Refusal at 9 ogs. Drilled with HSAs to 10 ogs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                               | $\vdash$      |            |                                    |  |  |
|                   | <del></del>                                  | <del></del>   | <del></del>                                      | <del></del>   | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               | <del></del>   |            |                                    |  |  |
| 10                | 134015                                       | 27/52         | 50                                               | 90            | (10'-11.5') Same as aboveML/SC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                               | $\overline{}$ |            |                                    |  |  |
|                   | (10-11.5)                                    | 103           |                                                  |               | Refusal at 11.5' bgs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                               |               |            |                                    |  |  |
| 11                | (1111)                                       | <del></del>   |                                                  |               | Note: Drilled to 15' bgs with HSAs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                                             |               |            |                                    |  |  |
|                   |                                              |               | <del></del>                                      |               | 1000. 511100 to 15 555 Hist 110/15.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               | $\overline{}$ |            |                                    |  |  |
| 12                |                                              |               |                                                  |               | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |               |            |                                    |  |  |
|                   |                                              |               |                                                  | -             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 1                                           |               |            |                                    |  |  |
| 13                |                                              |               |                                                  |               | ı                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |               |            |                                    |  |  |
|                   |                                              |               | ,                                                |               | ı                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |               |            |                                    |  |  |
| 14                |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            |                                    |  |  |
|                   |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            | 14.5'                              |  |  |
| 15                |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            | 15' Sump                           |  |  |
|                   |                                              |               |                                                  |               | Terminated soil boring at 15 feet bgs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                               |               |            | (14.5-15')                         |  |  |
|                   |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            |                                    |  |  |
|                   |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            |                                    |  |  |
|                   |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            |                                    |  |  |
|                   |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               | ļ          |                                    |  |  |
|                   |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            |                                    |  |  |
|                   |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            |                                    |  |  |
|                   |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            |                                    |  |  |
| $\longrightarrow$ |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |               |            |                                    |  |  |
|                   |                                              |               |                                                  |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <u> </u>                                      |               |            |                                    |  |  |
|                   | ~                                            |               |                                                  |               | COMMENTS: Collected soil samples 134014 (0'-2') bgs and 134015 (10'-11.5') bgs for B/N/A SVOCs, T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | TAI Mai                                       | tala Cuani    | Jo and     | Mitteeta analysis Installed 2-inch |  |  |
|                   | SAMPLING<br>SS = SPLIT SPOON                 | G METHOR      | ,                                                |               | monitoring well. In field notebook as SB/MW13-10 for work during August and Septemb                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |               | .10, 6111. | Will die grafysis. Transacte 2 men |  |  |

SS = SPLIT SPOON

A = AUGER CUTTINGS

C = CORED

### OVERBURDEN MONITORING WELL **COMPLETION REPORT & INSTALLATION DETAIL**

PROTECTIVE RISER COMPLETION

|                                             |            |              |            | ··········· |            |             |             |  |
|---------------------------------------------|------------|--------------|------------|-------------|------------|-------------|-------------|--|
| PARSONS ENGINEERING SO                      |            | CLIENT:      | ACOE       |             |            | WELL#: 🎤    | 14-13-10    |  |
| PROJECT: 10 S                               | WMU        |              | _          | P           | ROJECT NO: | 736 9       | 944         |  |
| LOCATION: SEA                               | P 13       |              | _          | Ì           | INSPECTOR: | Ed ;        | Ashta       |  |
|                                             |            |              |            | CH          | ÆCKED BY:  | Ed A        | tshta       |  |
| DRILLING CONTRACTOR:                        | STBI       | a.c.         |            | P           | OW DEPTH:  | 15          | *           |  |
| DRILLER:                                    | John W     | ar NE        | -<br>_     | NSTALLATION | STARTED:   | 8/16        | 10/ 1904    |  |
| DRILLING COMPLETED:                         | 8116101    |              | INS        | TALLATION C | OMPLETED:  |             |             |  |
| BORING DEPTH:                               | 15'        |              | SURI       | FACE COMPLE | TION DATE: |             |             |  |
| DRILLING METHOD(S):                         | H SA       |              | COMPLET    | ION CONTRAC | TOR/CREW:  | SJBZ        | nc.         |  |
| BORING DIAMETER(S):                         | 8/2-       | iv.          | BEDI       | ROCK CONFIR | MED (Y/N?) |             |             |  |
| ASSOCIATED SWMU/AOC:                        |            |              | ESTIMATE   | ED GROUND E | LEVATION:  |             |             |  |
| PROTECTIVE SURFACE CAS                      | ING:       |              |            |             |            |             |             |  |
|                                             | DIAMETER:  | 9" x 4" stee | LENGTH:    | 3.5         | _          | TOR:        |             |  |
| RISER:                                      |            |              |            |             |            |             |             |  |
| TOC:                                        | TYPE:      | PVC 40       | DIAMETER:  | 2"          | LENGTH:    |             |             |  |
| SCREEN:                                     |            |              |            |             |            |             | SLOT        |  |
| TSC: <u>9.5</u>                             | TYPE:      | PVC40        | DIAMETER:  | 2           | LENGTH:    | 10          | SIZE: 0.01" |  |
| POINT OF WELL: (SILT SUMP)  YPE:   VC Point |            | (4-1         |            |             |            |             |             |  |
|                                             | / BSC:     | 14.5         | POW        | :           |            |             |             |  |
| GROUT: TG:                                  | (von of    | TYPE:        | Cemat-Bi   | LENGTH:     |            | 1.0'        |             |  |
| SEAL: TBS:                                  | _lo'       | TYPE:        | Bent pelle | LENGTH:     |            | 2.5'        |             |  |
| SAND PACK: TSP:                             | 3.5'       | ТҮРЕ:        | #0         | LENGTH:     |            | 11.5'       |             |  |
| SURFACE COLLAR: TYPE:                       | D A D.W.C. | 2'x2'        |            |             | , '        |             | , (         |  |
|                                             | KADIUS:    |              | THICK      | NESS CENTER | .:         | THICKNES    | SS EDGE:    |  |
| CENTRALIZER DEPTHS                          | W          |              |            |             |            |             |             |  |
| DEPTH 1:                                    | DEPTH 2:   |              | DEPTH 3    |             | _          | DEPTH 4:    |             |  |
| COMMENTS:                                   |            |              |            |             |            |             |             |  |
|                                             |            |              |            |             |            |             |             |  |
|                                             |            |              |            |             |            |             |             |  |
|                                             |            |              |            |             |            |             |             |  |
|                                             |            |              |            |             |            |             |             |  |
|                                             |            | ALL DEPTH ME | EASUREMENT | S REFERENCE | D TO GROU  | IND SURFACE |             |  |
| CEE BACE 2 FOR OCCUR.                       | Tr o       |              |            | -           |            |             |             |  |

## OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ACOE WELL#: MW-13-10 PARSONS ENGINEERING SCIENCE, INC. CLIENT: DATE: 8/16/01 DEPTH **ELEV** -TPC--TOC-DESCRIPTION PIN-(FROM BORING LOG) DEPTH SCHEMATIC TG See Boring Log SB -13-10 TBS-TSP-- TSC-BSC-POW-15.0' - BOV-**BEDROCK** BOD.

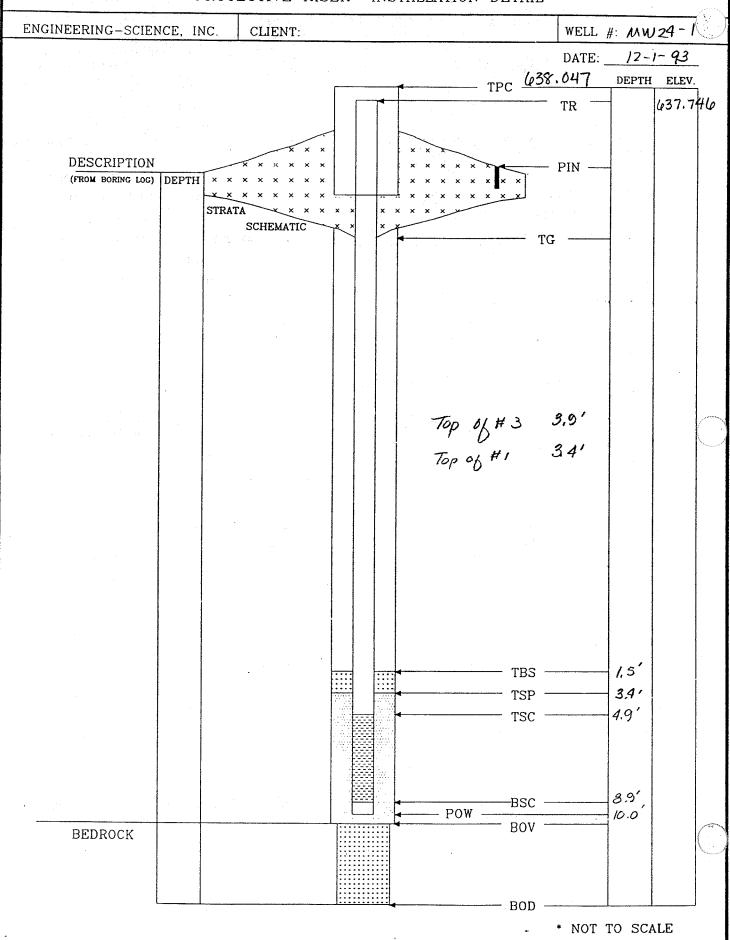
### OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

| ENGINEERING-SCIENCE, INC. CLIENT:         | ACOE WELL #: MW24-1                     |
|-------------------------------------------|-----------------------------------------|
| PROJECT: 10 SWMU                          | PROJECT NO: 5B 24-5                     |
| location: SEAD 24                         | INSPECTOR:                              |
|                                           | CHECKED BY:                             |
| DRILLING CONTRACTOR: Empire               | POW DEPTH: )O,O'                        |
| DRILLER: Scott                            | INSTALLATION STARTED: 12-1-9.3          |
| DRILLING COMPLETED: 12-1-93               | INSTALLATION COMPLETED: 12-1-93         |
| BORING DEPTH: 10.0                        | SURFACE COMPLETION DATE:                |
| DRILLING METHOD(S): H5A                   | COMPLETION CONTRACTOR/CREW: Empiré      |
| BORING DIAMETER(S): $8\%$ 2 *             | BEDROCK CONFIRMED (Y/N?)                |
| ASSOCIATED SWMU/AOC: 24                   | estimated ground elevation: 635.374     |
| PROTECTIVE SURFACE CASING:                |                                         |
| DIAMETER: 4"x 4" Steel                    | LENGTH:                                 |
| RISER:                                    |                                         |
| TR: TYPE: ρνς-40                          | diameter: $2''$ length:                 |
| SCREEN:                                   | SLOT                                    |
| TSC: 4.9' TYPE: PVC - 40                  | DIAMETER: 2" LENGTH: 4,0 size: 001"     |
| POINT OF WELL: (SILT SUMP)                | 7                                       |
| TYPE: PVC point BSC: 8.9'                 | POW: 10.0                               |
| GROUT:                                    |                                         |
| TG: Ground TYPE                           | Coment-bentonite LENGTH: 1.5'           |
| SEAL: TBS: 1, 5' TYPE:                    | bentonite pellets LENGTH: 1.9'          |
| SAND PACK: TSP: <u>34' #1</u> 39 #3 TYPE: |                                         |
| SURFACE COLLAR:                           |                                         |
| TYPE: Coment RADIUS: 2'x 2'               | THICKNESS CENTER: /' THICKNESS EDGE: /' |
| CENTRALIZER DEPTHS                        |                                         |
| DEPTH 1: DEPTH 2:                         | DEPTH 3: DEPTH 4:                       |
|                                           |                                         |
| COMMENTS:                                 |                                         |
|                                           |                                         |
|                                           | 1                                       |
|                                           |                                         |
| * ALL DEPTH MEA                           | ASUREMENTS REFERENCED TO GROUND SURFACE |
|                                           |                                         |

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

## OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL



OVERBURDEN MONITORING COMPLETION REPORT & INSTALLATION DETAIL ROADWAY BOX - SURFACE COMPLETION ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW 24- 2 PROJECT: 10 SWMU PROJECT NO: LOCATION: SEAD INSPECTOR: ES/LB CHECKED BY: DRILLING CONTRACTOR: Empire POW DEPTH: 16.0 DRILLER: INSTALLATION STARTED: 11/5/93 DRILLING COMPLETED: 11/5/93 INSTALLATION COMPLETED: 11/6/93 BORING DEPTH: 16.0 SURFACE COMPLETION DATE: DRILLING METHOD(S): BSΑ COMPLETION CONTRACTOR/CREW: Empire BORING DIAMETER(S): 81/2" BEDROCK CONFIRMED (Y/N?) ASSOCIATED SWMU/AOC: 24 ESTIMATED GROUND ELEVATION: 629.856 PROTECTIVE SURFACE CASING: DIAMETER: 4", 4" Steel LENGTH: TYPE: PVC 40 DIAMETER: SLOT TSC: 5.9' SIZE: 0.01 " POINT OF WELL: (SILT SUMP) TYPE: PVC point BSC: POW: 16.0 TG: Ground TYPE: Cem - benton to LENGTH: TBS: TYPE: Bentonto pellets LENGTH: SAND PACK: 44 # 1 4.9-#3 TYPE: #3 and #1 LENGTH:

ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

THICKNESS CENTER:

DEPTH 3:

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

RISER:

SCREEN:

GROUT:

SEAL:

SURFACE COLLAR:

COMMENTS:

CENTRALIZER DEPTHS

DEPTH 1:

TYPE: Cement

RADIUS:

DEPTH 2:

## OVERBURDEN MONITORING WELL ROADWAY BOX INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC. CLIENT: WELL #: MW24-2 (...) DATE: DEPTH ELEV. 632.281 TPC -DESCRIPTION PIN (FROM BORING LUG) DEPTH 632.176 -TR SCHEMATIC TG Cement bentonite Noks: grout Top of #3 sand 4.9'
Top of #1 sand 4.4'
Top of Weath.
Shale 9.3' Prot. Casing shekup 2,5' Downhole 2,5' TBS -TSP -4.4 TSC -59 90' screen 7 V water at 10.4. 1.1' connection 14.9' POW -16.0 BEDROCK - BOD -Al depths measured to ground SWIDGE \* NOT TO SCALE

# OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL ROADWAY BOX - SUPERCE COMPLETION

| ROADWAY BOX -                     | SURFACE COMPLETION                    |
|-----------------------------------|---------------------------------------|
| ENGINEERING-SCIENCE, INC. CLIENT: | WELL #: MW 24- 3                      |
| PROJECT: 16 SWMU                  | PROJECT NO: 5                         |
| LOCATION: SEAD 24                 | INSPECTOR: ES                         |
|                                   | CHECKED BY:                           |
| DRILLING CONTRACTOR: Empire       | POW DEPTH: 15.0                       |
| DRILLER: A                        | INSTALLATION STARTED: 11/6/93         |
| DRILLING COMPLETED: 11/6/93       | INSTALLATION COMPLETED: 11/6/93       |
| BORING DEPTH: 15.                 | SURFACE COMPLETION DATE:              |
| DRILLING METHOD(S):HSA            | COMPLETION CONTRACTOR/CREW: Empire    |
| BORING DIAMETER(S): 81/2 //       | BEDROCK CONFIRMED (Y/N?)              |
| ASSOCIATED SWMU/AOC: 24           | ESTIMATED GROUND ELEVATION: 629.080   |
| PROTECTIVE SURFACE CASING:        |                                       |
| DIAMETER: 4"x 4" Spel             | LENGTH: 5.0' total                    |
| RISER:                            |                                       |
| TR: TYPE: PYC 40                  | DIAMETER: 2" LENGTH:                  |
| SCREEN:                           | SLOT                                  |
| TSC: 4.9' TYPE: PVC 40            | DIAMETER: 11 LENGTH: 0' SIZE: 0.01"   |
| POINT OF WELL: (SILT SUMP)        |                                       |
| TYPE: Pic point BSC: 13.9'        | POW: 15.0                             |
| GROUT:                            |                                       |
| TG: Gwund TYPE:                   | Cem-bontonik LENGTH: 28'              |
| SEAL: TBS: 2.8' TYPE:             | Bentonite pellets LENGTH: .6'         |
| 3.0/ - 41                         | #3 # #1 Silica LENGTH: 11.61          |
| SURFACE COLLAR:                   |                                       |
| TYPE: Climan RADIUS: 2'x2'        | THICKNESS CENTER: 1 THICKNESS EDGE: 1 |
| CENTRALIZER DEPTHS                | ·                                     |
| DEPTH 1: DEPTH 2:                 | DEPTH 3:                              |
| COMMENTS:                         |                                       |
|                                   |                                       |
|                                   |                                       |
|                                   |                                       |
|                                   |                                       |
| SEE PAGE 2 FOR SCHEMATIC          | UREMENTS REFERENCED TO GROUND SURFACE |
| LE INCE & FUK SCHEMATIC           |                                       |

## OVERBURDEN MONITORING WELL ROADWAY BOX INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC. WELL #: MW 24-3 CLIENT: DATE: DEPTH ELEV. TPC -631.701 DESCRIPTION 631.531 (FROM BORING LOG) DEPTH SCHEMATIC TG Note: Top of #3 Sand 3.9'
Top of #1 Sand 3.4' Prol. Caping Stickup 25'30 30' Down hole 25'20 2.5´ 2<del>8</del>6′ TBS 3,4 1 TSP - TSC -49' I wake @ 10.0' 13.9' POW -15.0 **BEDROCK** Note: All depths measured from ground surface \* NOT TO SCALE

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998032.1 751123.1 GROUND SURFACE ELEVATION: 740.3

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger

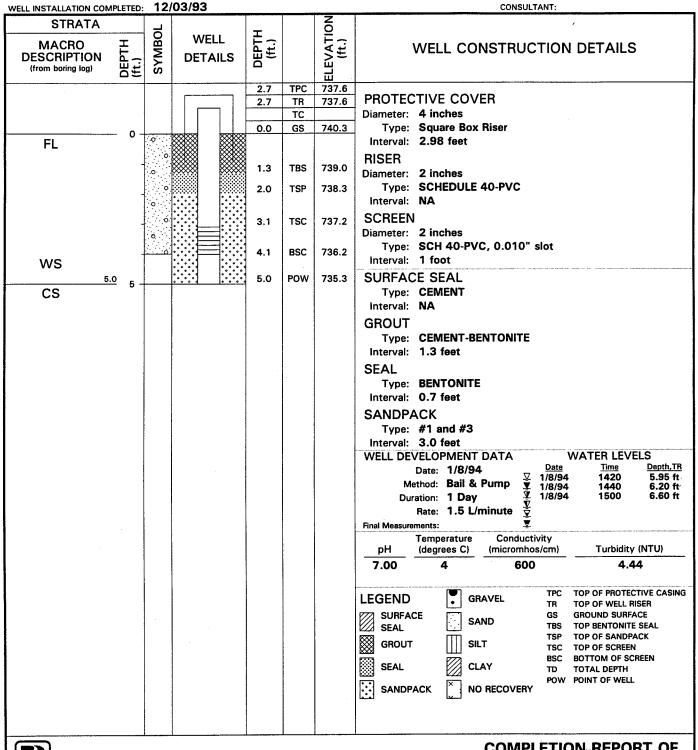
WELL INSTALLATION STARTED: 12/03/93

CHECKED BY: P.Feschbach-Meriney

DATUM: NGVD 88

GEOLOGIST: E. Schacht

CONSULTANT:



PARSONS

ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York **COMPLETION REPORT OF** WELL No. MW25-1

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998023.1 750973.4 GROUND SURFACE ELEVATION: 743.8 DRILLING CONTRACTOR: Empire Soils Investigation, Inc. DATUM: NGVD 88

DRILLING METHOD: Hollow Stem Auger GEOLOGIST: E. Schacht

WELL INSTALLATION STARTED: 11/07/93 CHECKED BY: P.Feschbach-Meriney

| WELL INSTALLATION STARTED: 11/07 WELL INSTALLATION COMPLETED: 11/07 |           |               |                    | CONSULTANT:                                                           |
|---------------------------------------------------------------------|-----------|---------------|--------------------|-----------------------------------------------------------------------|
| STDATA                                                              |           | 1             | Z                  |                                                                       |
| MACRO E                                                             | WELL E E  |               | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                             |
|                                                                     | 2.6       | TPC           | 741.1              | PROTECTIVE COVER                                                      |
|                                                                     | 2.6       | TR            | 741.1              | PROTECTIVE COVER                                                      |
|                                                                     |           | TC            |                    | Diameter: 4 inches                                                    |
| o                                                                   | 0.0       | GS            | 743.8              | Type: Square Box Riser Interval: 2.84 feet                            |
| TL 3.3.3                                                            | $\bowtie$ |               |                    |                                                                       |
|                                                                     | ₩ 1.2     | TBS           | 742.6              | RISER                                                                 |
|                                                                     |           |               |                    | Diameter: 2 inches                                                    |
| <b>•</b> • • • • • • • • • • • • • • • • • •                        | 2.0       | TSP           | 741.8              | Type: SCHEDULE 40-PVC                                                 |
|                                                                     |           |               |                    | Interval: NA                                                          |
|                                                                     |           |               |                    | SCREEN                                                                |
|                                                                     | 3.4       | TSC           | 740.4              | Diameter: 2 inches                                                    |
|                                                                     |           |               |                    | Type: SCH 40-PVC, 0.010" slot                                         |
| •                                                                   |           |               |                    | Interval: 4 feet                                                      |
| 5                                                                   |           |               |                    | SURFACE SEAL                                                          |
| WS :::                                                              |           |               |                    | Type: CEMENT                                                          |
| CS                                                                  |           |               |                    | Interval: NA                                                          |
|                                                                     |           |               |                    | GROUT                                                                 |
|                                                                     |           |               |                    | Type: CEMENT-BENTONITE                                                |
|                                                                     | 7.4       | BSC           | 736.4              | Interval: 1.2 feet                                                    |
|                                                                     |           |               |                    | SEAL -                                                                |
| 8.5                                                                 | 8.5       | POW           | 735.3              | Type: BENTONITE                                                       |
|                                                                     |           |               |                    | Interval: 0.8 feet                                                    |
| ·                                                                   |           |               |                    | SANDPACK                                                              |
|                                                                     |           |               |                    | Type: <b>#1 and #3</b>                                                |
|                                                                     |           |               |                    | Interval: 6.5 feet                                                    |
|                                                                     |           |               |                    | WELL DEVELOPMENT DATA WATER LEVELS  Date: 11/11/93 Date Time Depth,TR |
|                                                                     |           |               |                    | Date. 17/11/93                                                        |
|                                                                     |           |               |                    | Method: Ball & Pump ₹ 11/11/93 1430 10.24 ft                          |
|                                                                     |           |               |                    | Duration: 11 Days   ▼ 11/21/93                                        |
|                                                                     |           |               |                    | Final Measurements:                                                   |
|                                                                     |           |               |                    | Temperature Conductivity                                              |
|                                                                     |           |               |                    | pH (degrees C) (micromhos/cm) Turbidity (NTU)                         |
|                                                                     |           |               |                    | 7.19 12 700 1.23                                                      |
|                                                                     |           |               |                    | LEGEND GRAVEL TPC TOP OF PROTECTIVE CASIN                             |
| .                                                                   |           |               |                    | CC COOLING CUREACE                                                    |
|                                                                     |           |               |                    | SURFACE SAND GS GROUND SURFACE TBS TOP BENTONITE SEAL                 |
|                                                                     |           |               |                    | TSP TOP OF SANDPACK                                                   |
|                                                                     |           |               |                    | GROOT SILI TSC TOP OF SCREEN  BSC BOTTOM OF SCREEN                    |
|                                                                     |           |               |                    | SEAL CLAY TO TOTAL DEPTH                                              |
|                                                                     |           |               |                    | SANDPACK NO RECOVERY                                                  |
|                                                                     |           |               |                    | I SANDI ACK                                                           |
|                                                                     |           |               |                    |                                                                       |
| <b>P</b>                                                            |           |               |                    | COMPLETION REPORT OF                                                  |
| PARSONS                                                             | Sa        | neca <i>l</i> | Armv D             | WELL No. MW25-2                                                       |

ENGINEERING-SCIENCE, INC. Romulus, New York

Seneca Army Depot

CHECKED BY: P.Feschbach-Meriney

### **COMPLETION REPORT OF WELL No. MW25-3**

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998078.3 750926.3 GROUND SURFACE ELEVATION: 743.3

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DATUM: NGVD 88

DRILLING METHOD: Hollow Stem Auger GEOLOGIST: E. Schacht

WELL INSTALLATION STARTED: 11/07/93 CHECKED BY:
WELL INSTALLATION COMPLETED: 11/07/93 CONSULTANT:

| WELL INSTALLATION CON                     | APLETED:       | 11     | /07/93          |                |     |                    | CONSULTANT:                                                            |
|-------------------------------------------|----------------|--------|-----------------|----------------|-----|--------------------|------------------------------------------------------------------------|
| STRATA                                    |                |        |                 |                |     | N                  |                                                                        |
| MACRO<br>DESCRIPTION<br>(from boring log) | DEPTH<br>(ft.) | SYMBOL | WELL<br>DETAILS | DEPTH<br>(ft.) |     | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                              |
| - <u> </u>                                |                |        |                 | 2.6            | TPC | 740.7              |                                                                        |
|                                           |                |        |                 | 2.5            | TR  | 740.7              | PROTECTIVE COVER                                                       |
|                                           |                |        |                 |                | TC  |                    | Diameter: 4 inches                                                     |
|                                           | <u> </u>       |        |                 | 0.0            | GS  | 743.3              | Type: Square Box Riser                                                 |
| TL                                        |                |        |                 |                |     |                    | Interval: 2.55 feet                                                    |
|                                           | _              |        | ₩ ₩             |                |     |                    | RISER                                                                  |
|                                           |                |        |                 | 1.5            | TBS | 741.8              | Diameter: 2 inches                                                     |
|                                           | -              |        |                 |                |     |                    | Type: SCHEDULE 40-PVC                                                  |
|                                           |                |        |                 | 2.5            | TSP | 740.8              | Interval: NA                                                           |
|                                           | _              |        |                 |                |     |                    | SCREEN                                                                 |
|                                           |                |        |                 |                |     |                    | Diameter: 2 inches                                                     |
| WS                                        | _              |        |                 | 4.0            | TSC | 739.3              | Type: SCH 40-PVC, 0.010" slot                                          |
|                                           |                |        |                 |                |     |                    | Interval: 2 feet                                                       |
|                                           | - 5-           |        |                 |                |     |                    | SURFACE SEAL                                                           |
| CS                                        | •              |        |                 |                |     |                    | Type: CEMENT                                                           |
|                                           |                |        |                 | 6.0            | BSC | 737.3              | Interval: NA                                                           |
| 6                                         | .5             |        |                 | 6.5            | POW | 736.8              | GROUT                                                                  |
|                                           |                |        |                 |                |     |                    | Type: CEMENT-BENTONITE                                                 |
|                                           |                |        |                 |                |     |                    | Interval: 1.5 feet                                                     |
|                                           |                |        |                 | İ              |     |                    | SEAL                                                                   |
|                                           |                |        |                 |                |     |                    | Type: BENTONITE                                                        |
|                                           |                |        |                 |                |     |                    | Interval: 1.0 feet                                                     |
|                                           |                |        |                 |                |     |                    | SANDPACK                                                               |
|                                           |                |        |                 |                |     |                    | Type: #1 and #3                                                        |
|                                           |                |        |                 |                |     |                    | Interval: 4.0 feet                                                     |
|                                           |                |        |                 |                |     |                    | WELL DEVELOPMENT DATA WATER LEVELS                                     |
|                                           |                |        |                 |                |     |                    | Date: 11/9/93 <u>Date Time</u> <u>Depth,TR</u> ✓ 11/9/93 1345 4.80 ft  |
|                                           |                |        |                 |                |     |                    | Method: Bail & Pump ¥ 11/9/93 1405 9.50 ft                             |
|                                           |                |        |                 | ļ              |     | ļ                  | Duration: 2 Days   ▼ 11/11/93 0930 4.90 ft  ▼ 11/11/93 1045 7.90 ft    |
|                                           |                |        |                 |                |     |                    | Hate: 1.0 L/minute \( \frac{7}{2} \) 11/11/93 1410 7.70 ft             |
|                                           |                |        |                 |                |     |                    | Final Measurements:                                                    |
|                                           |                |        |                 |                |     |                    | Temperature Conductivity pH (degrees C) (micromhos/cm) Turbidity (NTU) |
|                                           |                |        |                 |                |     |                    | 7.42 12.2 500 1.73                                                     |
|                                           |                |        |                 |                |     |                    |                                                                        |
|                                           |                |        |                 |                |     |                    | LEGEND GRAVEL TPC TOP OF PROTECTIVE CASING                             |
|                                           |                |        |                 |                |     | -                  |                                                                        |
|                                           |                |        |                 |                |     |                    | SURFACE SEAL SAND GS GROUND SURFACE TBS TOP BENTONITE SEAL             |
|                                           |                |        |                 |                |     |                    | VZZI OCAL                                                              |
|                                           |                |        |                 |                |     |                    | GROUT SILT TSP TOP OF SANDPACK TSC TOP OF SCREEN                       |
|                                           |                |        |                 |                |     |                    | SEAL CLAY BSC BOTTOM OF SCREEN TD TOTAL DEPTH                          |
|                                           |                |        |                 |                |     |                    | POW POINT OF WELL                                                      |
|                                           |                |        |                 |                |     |                    | SANDPACK NO RECOVERY                                                   |
| 1                                         |                |        |                 |                |     |                    |                                                                        |
|                                           |                |        |                 |                |     |                    |                                                                        |
|                                           |                | ····   |                 |                |     |                    | COMPLETION REPORT OF                                                   |



ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York COMPLETION REPORT OF WELL No. MW25-3

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998022.1 750983.2

GROUND SURFACE ELEVATION: 743.8

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DATUM: NGVD 88

DRILLING METHOD: Rock Coring

GEOLOGIST: F. O'Loughlin

WELL INSTALLATION STARTED: 10/31/95

CHECKED BY: P.Feschbach-Meriney

WELL INSTALLATION COMPLETED: 10/31/95

| STRATA                                    |                | 7          | ·               | _              |     | N N                |                                                                        |
|-------------------------------------------|----------------|------------|-----------------|----------------|-----|--------------------|------------------------------------------------------------------------|
| MACRO<br>DESCRIPTION<br>(from boring log) | DEPTH<br>(ft.) | SYMBOL     | WELL<br>DETAILS | DEPTH<br>(ft.) |     | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                              |
|                                           |                |            |                 | 1.8            | TPC | 742.0              | PROTECTIVE COVER                                                       |
|                                           | ,              |            |                 | 1.6            | TR  | 742.2              | PROTECTIVE COVER Diameter: 4 inches                                    |
|                                           |                |            |                 | 0.0            | GS  | 743.8              | Type: Round Box Riser                                                  |
| TL                                        | - 0 -          | ., .       |                 | 0.0            |     | 740.0              | Interval: 10.6 feet                                                    |
| '                                         |                |            |                 |                |     |                    | RISER                                                                  |
|                                           |                | <b>:</b> : | <b>****</b>     |                |     |                    | Diameter: 2 inches                                                     |
|                                           | -              |            | <b>****</b>     |                |     |                    | Type: SCHEDULE 40-PVC                                                  |
|                                           | [              | • √ •      | <b>****</b>     |                |     |                    | Interval: NA                                                           |
|                                           |                |            | <b>****</b>     |                |     |                    | SCREEN                                                                 |
|                                           | 1              |            | <b>****</b>     |                |     |                    | Diameter: 1.875 in.                                                    |
|                                           | 5 -            | •.•        | <b>***</b>      |                |     |                    | Type: WIRE & PVC, 0.010"                                               |
| ws                                        | _              |            | <b>****</b>     |                |     |                    | Interval: 9 feet                                                       |
| CS                                        |                |            | <b>****</b>     |                |     |                    | SURFACE SEAL                                                           |
|                                           | ĺ              |            | <b>****</b>     |                |     |                    | Type: CEMENT                                                           |
|                                           |                |            | <b>****</b>     |                |     |                    | Interval: NA                                                           |
|                                           |                |            | <b>****</b>     |                |     |                    | GROUT                                                                  |
|                                           |                |            | <b>***</b>      |                |     |                    | Type: CEMENT-BENTONITE                                                 |
|                                           | ŀ              |            | *****           | 9.4            | TBS | 734.4              | Interval: 8.4 feet                                                     |
|                                           |                |            |                 |                |     |                    | SEAL                                                                   |
|                                           |                |            |                 |                |     |                    | Type: BENTONITE                                                        |
|                                           |                |            |                 | 11.4           | TSP | 732.4              | Interval: 2.0 feet                                                     |
|                                           |                |            |                 |                |     |                    | SANDPACK                                                               |
|                                           |                | 1          |                 |                |     |                    | Type: Morie 0 and #1Q Rock Interval: 12.4 feet                         |
|                                           |                |            |                 | 13.7           | TSC | 730.1              | WELL DEVELOPMENT DATA WATER LEVELS                                     |
|                                           |                |            |                 | 13.7           | .50 | 730.1              | Date: 11/2/95 Date Time Depth,TR                                       |
|                                           |                |            |                 |                |     |                    | Method: Surge Block ▼ 11/2/95 1054 7.20 ft                             |
|                                           |                |            |                 |                |     |                    | Duration: 1 Day $\frac{\bar{\mathbf{v}}}{\bar{\mathbf{v}}}$            |
|                                           |                |            |                 |                |     |                    | Rate: 0.936 L/minute                                                   |
|                                           |                | i          |                 |                |     |                    | Final Measurements:                                                    |
|                                           |                | l          |                 |                |     |                    | Temperature Conductivity pH (degrees C) (micromhos/cm) Turbidity (NTU) |
|                                           |                |            |                 |                |     |                    | 7.16 13.8 600 12.1                                                     |
|                                           |                |            |                 |                |     |                    |                                                                        |
|                                           |                | ].         |                 |                |     |                    | LEGEND GRAVEL TPC TOP OF PROTECTIVE CASING                             |
|                                           |                |            |                 |                |     |                    | SURFACE GS GROUND SURFACE                                              |
|                                           |                |            |                 |                |     |                    | SEAL TBS TOP BENTONITE SEAL                                            |
|                                           |                |            |                 |                |     |                    | GROUT SILT TSP TOP OF SANDPACK TSC TOP OF SCREEN                       |
|                                           |                |            |                 |                |     |                    | BSC BOTTOM OF SCREEN                                                   |
|                                           |                | ļ          |                 | 22.7           | BSC | 721.1              | SEAL CLAY TO TOTAL DEPTH                                               |
|                                           |                |            |                 |                |     |                    | SANDPACK NO RECOVERY POW POINT OF WELL                                 |
| 23.0                                      | В              | ļ          |                 | 23.8           | POW | 720.0              | المسقا الإسبا                                                          |
|                                           |                |            |                 |                |     |                    |                                                                        |
|                                           |                |            |                 |                |     |                    |                                                                        |



ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York

WELL No. MW25-4D

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998080.2 750937.0

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Rock Coring

WELL INSTALLATION STARTED: 10/30/95 WELL INSTALLATION COMPLETED: 10/30/95

ENGINEERING-SCIENCE, INC.

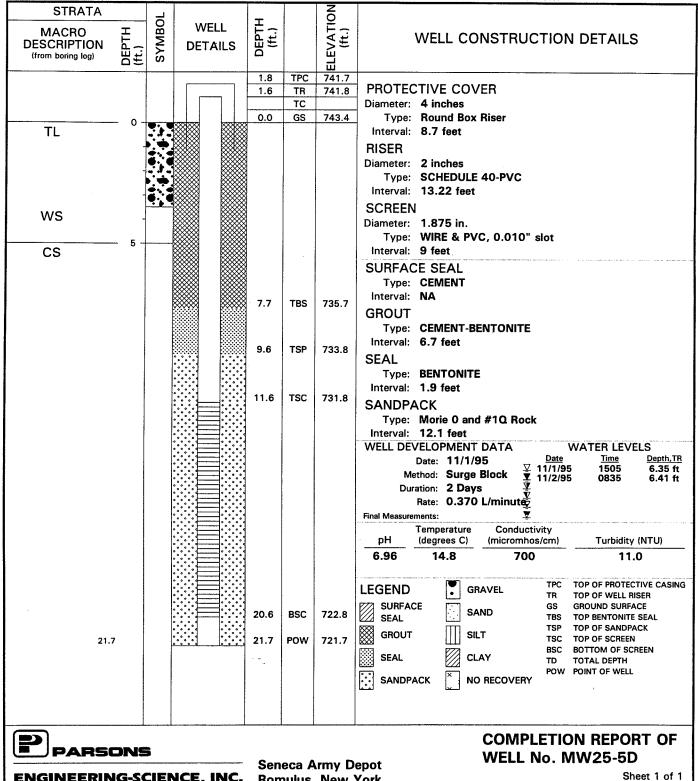
GROUND SURFACE ELEVATION: 743.4

DATUM: NGVD 88

GEOLOGIST: F. O'Loughlin

CHECKED BY: P.Feschbach-Merinev

CONSULTANT:



Sheet 1 of 1

### COMPLETION REPORT OF WELL No. MW25-6

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998276.8 751006.2

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger

WELL INSTALLATION STARTED: 09/25/95

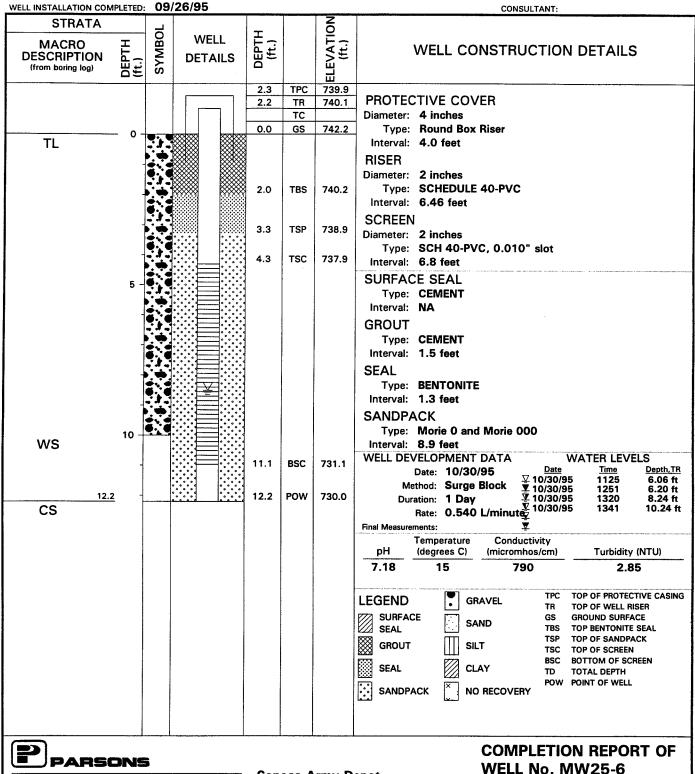
**ENGINEERING-SCIENCE, INC.** 

DATUM: NGVD 88 GEOLOGIST: F. O'Loughlin

CHECKED BY: P.Feschbach-Meriney

CONSULTANT:

GROUND SURFACE ELEVATION: 742.2



Seneca Army Depot

Sheet 1 of 1

DATUM: NGVD 88

GEOLOGIST: F. O'Loughlin

### COMPLETION REPORT OF WELL No. MW25-7D

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998277.7 751015.9 GROUND SURFACE ELEVATION: 742.2

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Rock Coring

WELL INSTALLATION STARTED: 10/24/95

**ENGINEERING-SCIENCE, INC.** 

CHECKED BY: P.Feschbach-Meriney WELL INSTALLATION COMPLETED: 10/24/95

| WELL INSTALLATION COM                     | PLETED:        | 10          | /24/95                                        |                |       |                    | CONSULTANT:                                                                                                                |
|-------------------------------------------|----------------|-------------|-----------------------------------------------|----------------|-------|--------------------|----------------------------------------------------------------------------------------------------------------------------|
| STRATA                                    |                |             |                                               |                |       | NC                 |                                                                                                                            |
| MACRO<br>DESCRIPTION<br>(from boring log) | DEPTH<br>(ft.) | SYMBOL      | WELL<br>DETAILS                               | DEPTH<br>(ft.) |       | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                                                                                  |
|                                           |                |             |                                               | 2.1            | TPC   | 740.2              | DROTECTIVE COVER                                                                                                           |
|                                           |                |             |                                               | 1.8            | TR    | 740.5              | PROTECTIVE COVER                                                                                                           |
|                                           |                |             |                                               | 0.0            | GS    | 742.2              | Diameter: 4 inches Type: Round Box Riser                                                                                   |
| TL                                        | - 0 -          | 47.4        |                                               | 0.0            | GS    | 142.2              | Interval: 17.6 feet                                                                                                        |
|                                           | -              |             | <b>!</b> ₩₩ ₩₩                                |                |       |                    | RISER                                                                                                                      |
|                                           | -              |             |                                               |                |       |                    | Diameter: 2 inches                                                                                                         |
|                                           | -              |             |                                               |                |       |                    | Type: SCHEDULE 40-PVC                                                                                                      |
|                                           | -              | <b>9</b> 7. | <b> </b>                                      |                |       |                    | Interval: 21.88 feet                                                                                                       |
|                                           | 5 -            |             | <b>****</b>                                   |                |       |                    | SCREEN                                                                                                                     |
|                                           | -              |             |                                               |                |       |                    | Diameter: 1.875 in.                                                                                                        |
|                                           | _              | • •         |                                               |                |       |                    | Type: WIRE & PVC, 0.010" slot                                                                                              |
|                                           | _              | •           | <b>                                      </b> |                |       |                    | Interval: 9 feet                                                                                                           |
|                                           | _              |             | ₩ ¥ ₩                                         |                |       |                    | SURFACE SEAL                                                                                                               |
|                                           | 10 -           |             | <b>                                     </b>  |                |       |                    | Type: CEMENT                                                                                                               |
| WS                                        | 10 -           |             | <b>                                     </b>  |                |       |                    | Interval: 1 foot                                                                                                           |
|                                           | -              |             |                                               |                |       |                    | GROUT                                                                                                                      |
| CS                                        | - ]            |             |                                               |                |       |                    | Type: CEMENT-BENTONITE Interval: NA                                                                                        |
| 00                                        |                |             |                                               |                |       |                    | SEAL                                                                                                                       |
|                                           |                |             | <b>                                      </b> |                |       |                    | Type: BENTONITE                                                                                                            |
|                                           |                |             | <b>****</b>                                   | 400            |       |                    | Interval: 2.1 feet                                                                                                         |
|                                           |                |             |                                               | 16.0           | TBS   | 726.2              | SANDPACK                                                                                                                   |
|                                           |                |             |                                               |                |       |                    | Type: Morie 0 and #1Q Rock                                                                                                 |
|                                           |                |             |                                               | 18.1           | TSP   | 724.1              | Interval: 12.4 feet                                                                                                        |
|                                           |                |             |                                               |                |       |                    | WELL DEVELOPMENT DATA WATER LEVELS                                                                                         |
|                                           |                |             |                                               | 20.1           | TSC   | 722.1              | Date: 10/31/95                                                                                                             |
|                                           |                |             |                                               |                | 1     |                    | Duration: 1 Day                                                                                                            |
|                                           |                |             |                                               |                |       |                    | Rate: 0.280 L/minutey                                                                                                      |
|                                           |                |             |                                               |                |       |                    | Final Measurements:                                                                                                        |
|                                           |                |             |                                               |                |       |                    | Temperature Conductivity                                                                                                   |
|                                           |                |             |                                               |                |       |                    | pH         (degrees C)         (micromhos/cm)         Turbidity (NTU)           7.32         10.0         700         10.6 |
|                                           |                |             |                                               |                |       |                    | 7.02 10.0 700 10.0                                                                                                         |
|                                           |                |             |                                               |                |       |                    | LEGEND GRAVEL TPC TOP OF PROTECTIVE CASING                                                                                 |
| Name of                                   |                |             |                                               |                |       |                    | IN TOP OF WELL RISER                                                                                                       |
|                                           |                |             |                                               | 29.1           | BSC   | 713.1              | SURFACE SAND GS GROUND SURFACE TBS TOP BENTONITE SEAL                                                                      |
|                                           |                |             |                                               | 30.2           | POW   | 712.0              | GROUT SILT TSP TOP OF SANDPACK TSC TOP OF SCREEN                                                                           |
| 30.5                                      | 5              |             | <u> </u>                                      | 30.2           | FUW   | 712.0              | BEC POTTOM OF SCREEN                                                                                                       |
|                                           |                |             |                                               |                |       |                    | SEAL CLAY TD TOTAL DEPTH POW POINT OF WELL                                                                                 |
|                                           |                |             |                                               |                |       |                    | SANDPACK NO RECOVERY                                                                                                       |
|                                           |                |             |                                               |                |       |                    | Manari Mirani                                                                                                              |
|                                           |                |             |                                               |                |       |                    |                                                                                                                            |
| <b>P</b>                                  |                | _           |                                               |                |       |                    | COMPLETION REPORT OF                                                                                                       |
| PARSO                                     |                | 5           |                                               | San            | ece A | \rmy D             | WELL No. MW25-7D                                                                                                           |
|                                           |                |             |                                               | 7611           | vuu r |                    | VPV.                                                                                                                       |

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998076.8 750856.9 GROUND SURFACE ELEVATION: 741.4

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DATUM: NGVD 88

DRILLING METHOD: Hollow Stem Auger

GEOLOGIST: F. O'Loughlin

WELL INSTALLATION STARTED: 09/26/95

CHECKED BY: P.Feschbach-Meriney

WELL INSTALLATION COMPLETED: 09/26/95

CONSULTANT:

| WELL INSTALLATION COM<br>STRATA | nrLE I EU:     |        | 26/95           |                |     | Z                  | CONSULTANT:                                                            |
|---------------------------------|----------------|--------|-----------------|----------------|-----|--------------------|------------------------------------------------------------------------|
| MACRO<br>DESCRIPTION            | Ħ.             | SYMBOL | WELL<br>DETAILS | DEPTH<br>(ft.) |     | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                              |
| (from boring log)               | DEPTH<br>(ft.) | SY     | DETAILS         |                |     | ELEV<br>(          |                                                                        |
|                                 |                |        |                 | 1.3            | TPC | 740.1<br>740.2     | PROTECTIVE COVER                                                       |
|                                 |                |        |                 | 3.1            | TC  | 740.2              | Diameter: 4 inches                                                     |
|                                 | - o -          |        |                 | 0.0            | GS  | 741.4              | Type: Round Box Riser                                                  |
| TL                              | _ 0-           |        |                 |                |     |                    | Interval: 2.50 feet                                                    |
|                                 |                |        |                 |                |     |                    | RISER                                                                  |
|                                 |                | ě, ě   | <b>****</b>     | 1.4            | TBS | 740.0              | Diameter: 2 inches                                                     |
|                                 | -              | •      |                 |                |     |                    | Type: SCHEDULE 40-PVC                                                  |
|                                 |                | 3.3    |                 | 2.4            | TSP | 739.0              | Interval: 4.34 feet                                                    |
| 1440                            | -              | - 3 -  |                 | 3.2            | TSC | 738.2              | SCREEN                                                                 |
| WS                              |                |        |                 |                |     |                    | Diameter: 2 inches                                                     |
|                                 | -              |        |                 | 4.0            | BSC | 737.4              | Type: SCH 40-PVC, 0.010" slot                                          |
| CS 4.                           | 5              |        | •               | 4.5            | POW | 736.9              | Interval: 0.8 feet                                                     |
|                                 |                |        |                 |                |     |                    | SURFACE SEAL                                                           |
|                                 |                |        |                 |                |     |                    | Type: CEMENT Interval: NA                                              |
|                                 |                |        |                 |                |     |                    | GROUT                                                                  |
|                                 |                |        |                 |                |     |                    | Type: NA                                                               |
|                                 |                |        |                 |                |     |                    | Interval: NA                                                           |
|                                 |                |        |                 |                |     |                    | SEAL                                                                   |
|                                 |                |        |                 |                |     |                    | Type: BENTONITE                                                        |
|                                 |                |        |                 |                |     |                    | Interval: 1.0 foot                                                     |
|                                 |                |        |                 |                |     |                    | SANDPACK                                                               |
|                                 |                |        |                 |                |     |                    | Type: Morie 0 and Morie 000                                            |
|                                 |                |        |                 |                |     |                    | Interval: 2.1 feet                                                     |
|                                 |                |        |                 |                | İ   |                    | WELL DEVELOPMENT DATA WATER LEVELS  Date: 10/22/95 Date Time Depth,TR  |
|                                 |                |        |                 |                |     |                    | 2 10/20/95 1624 3.32 ft                                                |
|                                 |                |        | i               |                |     |                    | Duration: 3 Days 7 10/22/95 1004 1.26 ft                               |
|                                 |                |        |                 |                |     |                    | Rate: 0.900 L/minute 10/22/95 1056 1.32 ft                             |
|                                 |                |        |                 |                |     |                    | Final Measurements:                                                    |
|                                 |                |        |                 |                |     |                    | Temperature Conductivity pH (degrees C) (micromhos/cm) Turbidity (NTU) |
|                                 |                |        |                 |                |     |                    | 7.35 14.5 350 7.3                                                      |
|                                 |                |        |                 |                |     |                    |                                                                        |
|                                 |                |        |                 |                |     |                    | LEGEND GRAVEL TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER        |
|                                 |                |        |                 |                |     |                    | SURFACE GS GROUND SURFACE                                              |
|                                 |                |        |                 |                |     |                    | SEAL IBS TOP BENTONTE SEAL                                             |
|                                 |                |        |                 |                |     |                    | GROUT SILT TSC TOP OF SCREEN                                           |
|                                 |                |        |                 |                |     |                    | SEAL CLAY BSC BOTTOM OF SCREEN TD TOTAL DEPTH                          |
|                                 |                | İ      |                 |                |     |                    | Edds POW POINT OF WELL                                                 |
|                                 |                |        |                 |                |     |                    | SANDPACK NO RECOVERY                                                   |
|                                 |                |        |                 |                |     |                    |                                                                        |
|                                 |                |        |                 |                |     |                    | COMPLETION REPORT OF                                                   |
| PARS                            | DNS            | 5      |                 |                |     |                    | MELL ALLANAGE O                                                        |



**ENGINEERING-SCIENCE, INC.** 

Seneca Army Depot Romulus, New York

WELL No. MW25-8

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998005.3 750898.1

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger

WELL INSTALLATION STARTED: 09/26/95

WELL INSTALLATION COMPLETED: 09/26/95

GROUND SURFACE ELEVATION: 741.3

DATUM: NGVD 88

GEOLOGIST: F. O'Loughlin

CHECKED BY: P.Feschbach-Meriney

| MACRO DESCRIPTION (from boring log)  TL  WELL DETAILS  WELL DETAILS  WELL DETAILS  WELL DETAILS  1.3 TPC 740.0 1.1 TR 740.2  Diameter: 4 inches Type: Round Box Riser Interval: 2.57 feet  RISER Diameter: 2 inches Type: SCHEDULE 40-PVC |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 1.3 TPC 740.0  1.1 TR 740.2  TC Diameter: 4 inches  Type: Round Box Riser Interval: 2.57 feet  RISER Diameter: 2 inches  Type: SCHEDULE 40-PVC                                                                                            |                    |
| 1.3 TPC 740.0  1.1 TR 740.2                                                                                                                                                                                                               |                    |
| TL  TC  O.0 GS 741.3  Type: Round Box Riser Interval: 2.57 feet RISER Diameter: 2 inches Type: SCHEDULE 40-PVC                                                                                                                            |                    |
| TL  O.0 GS 741.3 Type: Round Box Riser Interval: 2.57 feet RISER Diameter: 2 inches Type: SCHEDULE 40-PVC                                                                                                                                 |                    |
| TL  1.4 TBS 739.9 Interval: 2.57 feet  RISER  Diameter: 2 inches  Type: SCHEDULE 40-PVC                                                                                                                                                   |                    |
| 1.4 TBS 739.9 RISER Diameter: 2 inches Type: SCHEDULE 40-PVC                                                                                                                                                                              |                    |
| 1.4 TBS 739.9 Diameter: 2 inches Type: SCHEDULE 40-PVC                                                                                                                                                                                    |                    |
| Type: SCHEDULE 40-PVC                                                                                                                                                                                                                     |                    |
|                                                                                                                                                                                                                                           |                    |
| . 2.4   TSP   738.9   Interval: 4.27 feet                                                                                                                                                                                                 |                    |
| SCREEN                                                                                                                                                                                                                                    |                    |
| 3.2 TSC 738.1 Diameter: 2 inches                                                                                                                                                                                                          |                    |
| WS 4.0 BSC 737.3 Type: SCH 40-PVC, 0.010" slot                                                                                                                                                                                            |                    |
| 4.0 BSC 737.3 Type: SST 45-1 V3, 5.5 TO SIGN                                                                                                                                                                                              |                    |
| 4.8 SIREACE SEAL                                                                                                                                                                                                                          | ***                |
| CS Type: CEMENT                                                                                                                                                                                                                           |                    |
| Interval: NA                                                                                                                                                                                                                              |                    |
| GROUT                                                                                                                                                                                                                                     |                    |
| Type: NA                                                                                                                                                                                                                                  |                    |
| Interval: NA                                                                                                                                                                                                                              |                    |
| SEAL                                                                                                                                                                                                                                      |                    |
| Type: BENTONITE                                                                                                                                                                                                                           |                    |
| Interval: 1.0 foot                                                                                                                                                                                                                        |                    |
| SANDPACK                                                                                                                                                                                                                                  |                    |
| Type: Morie 0 and Morie 000                                                                                                                                                                                                               |                    |
| Interval: 2.1 feet WELL DEVELOPMENT DATA WATER LEVELS                                                                                                                                                                                     |                    |
|                                                                                                                                                                                                                                           | )<br>Depth,TR      |
| 10/20/95 1610 ¥ 10/20/95 1610                                                                                                                                                                                                             | 3.10 ft            |
| Duration: 3 Days ¥ 10/22/95 1040                                                                                                                                                                                                          | 1.27 ft<br>2.87 ft |
| Rate: 0.320 L/minut v 10/22/95 1150                                                                                                                                                                                                       | 3.50 ft            |
| Final Measurements:                                                                                                                                                                                                                       |                    |
| Temperature Conductivity pH (degrees C) (micromhos/cm) Turbidity (N                                                                                                                                                                       | FI IN              |
| 7.18 14.0 490 4.44                                                                                                                                                                                                                        | -                  |
|                                                                                                                                                                                                                                           |                    |
| LEGEND GRAVEL TR TOP OF PROTECTIVE                                                                                                                                                                                                        |                    |
| IN TOP OF WELL NISER                                                                                                                                                                                                                      | ſ                  |
| SURFACE SAND GS GROUND SURFACE SEAL SAND TBS TOP BENTONITE SEA                                                                                                                                                                            | <b>AL</b>          |
| GROUT SHIT TSP TOP OF SANDPACK                                                                                                                                                                                                            |                    |
| BSC ROTTOM OF SCREEN                                                                                                                                                                                                                      | Ni .               |
| CLAY TD TOTAL DEPTH                                                                                                                                                                                                                       |                    |
| SANDPACK NO RECOVERY POW POINT OF WELL                                                                                                                                                                                                    |                    |
|                                                                                                                                                                                                                                           |                    |
|                                                                                                                                                                                                                                           |                    |
|                                                                                                                                                                                                                                           |                    |
| COMPLETION REPORT                                                                                                                                                                                                                         | OF                 |



ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York COMPLETION REPORT OF WELL No. MW25-9

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 997965.0 751000.0

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger

WELL INSTALLATION STARTED: 09/27/95

GROUND SURFACE ELEVATION: 741.8

DATUM: NGVD 88

GEOLOGIST: F. O'Loughlin

CHECKED BY: P.Feschbach-Meriney

WELL INSTALLATION COMPLETED: 09/27/95 CONSULTANT: EVATION (ft.) **STRATA** SYMBOI WELL DEPTH (ft.) **MACRO** WELL CONSTRUCTION DETAILS DESCRIPTION **DETAILS** (from boring log) ᆸ 1.4 TPC 740.4 PROTECTIVE COVER 1.2 TR 740.6 Diameter: 4 inches TC Type: Round Box Riser 0.0 GS 741.8 Interval: 2.29 feet TL RISER 1.3 **TBS** 740.5 Diameter: 2 inches Type: SCHEDULE 40-PVC 2.4 **TSP** 739.4 Interval: 4.41 feet **SCREEN** TSC 738.6 Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 2.0 feet WS SURFACE SEAL 5.2 BSC 736.6 Type: CEMENT 5.6 POW 5.6 736.2 Interval: 0.8 feet CS GROUT Type: NA Interval: NA **SEAL** Type: BENTONITE Interval: 1.1 feet **SANDPACK** Type: Morie 0 and Morie 000 Interval: 2.8 feet WELL DEVELOPMENT DATA WATER LEVELS Date: 10/25/95 <u>Time</u> Depth,TR ▼ 10/22/95 ▼ 10/22/95 1310 1759 1.67 ft 4.30 ft Method: Surge Block Duration: 4 Days ¥ 10/23/95 1643 2.38 ft Rate: 0.090 L/minute 10/24/95 1315 2.86 ft Final Measurements: Conductivity Temperature (degrees C) Turbidity (NTU) Hq (micromhos/cm) 5.46 7.30 14 9 425 TOP OF PROTECTIVE CASING TPC GRAVEL **LEGEND** TR TOP OF WELL RISER **SURFACE** GS GROUND SURFACE SAND TOP BENTONITE SEAL SEAL TOP OF SANDPACK **GROUT** SILT TOP OF SCREEN **BOTTOM OF SCREEN BSC SEAL** CLAY TOTAL DEPTH TD POW POINT OF WELL **SANDPACK** NO RECOVERY



ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York

**COMPLETION REPORT OF** WELL No. MW25-10

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 997865.7 750956.7 GROUND SURFACE ELEVATION: 738.7

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

on. Linking Coms investigation

DRILLING METHOD: Hollow Stem Auger

G

GEOLOGIST: F. O'Loughlin
CHECKED BY: P.Feschbach-Meriney

DATUM: NGVD 88

**WELL No. MW25-11** 

Sheet 1 of 1

WELL INSTALLATION STARTED: 10/11/95
WELL INSTALLATION COMPLETED: 10/11/95

**ENGINEERING-SCIENCE, INC.** 

| STRATA                                    |                |             |                 |                |       | Z                  |                                                                                       |
|-------------------------------------------|----------------|-------------|-----------------|----------------|-------|--------------------|---------------------------------------------------------------------------------------|
| MACRO<br>DESCRIPTION<br>(from boring log) | DEPTH<br>(ft.) | SYMBOL      | WELL<br>DETAILS | DEPTH<br>(ft.) |       | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                                             |
|                                           |                |             |                 | 1.6            | TPC   | 737.1              | DDOTTOTIVE COVED                                                                      |
|                                           |                |             |                 | 1.5            | TR    | 737.2              | PROTECTIVE COVER                                                                      |
|                                           |                |             |                 | 0.0            | GS    | 738.7              | Diameter: 4 inches Type: Round Box Riser                                              |
| TL                                        | 0 -            | <b></b>     |                 | 0.0            | us    | /30./              | Interval: 4.53 feet                                                                   |
|                                           |                |             |                 |                |       |                    | RISER                                                                                 |
|                                           | -              | 3.3         | ₩ ₩             | 1.4            | TBS   | 737.3              | Diameter: 2 inches                                                                    |
|                                           |                |             |                 |                |       |                    | Type: SCHEDULE 40-PVC                                                                 |
|                                           | _              | 9.79        |                 |                | Ton . |                    | Interval: 5.35 feet                                                                   |
|                                           | _              | 3.35        |                 | 2.7            | TSP   | 736.0              | SCREEN                                                                                |
|                                           |                |             |                 |                |       |                    | Diameter: 2 inches                                                                    |
|                                           | -              | •           |                 | 3.8            | TSC   | 734.9              | Type: SCH 40-PVC, 0.010" slot                                                         |
|                                           |                | • •         |                 |                |       |                    | Interval: 1.5 feet                                                                    |
| 14/0                                      | 5 -            | <b>3)</b> 2 |                 | 5.3            | BSC   | 733.4              | SURFACE SEAL                                                                          |
| WS 5.                                     | 7              |             |                 | 5.7            | POW   | 733.4              | Type: CEMENT                                                                          |
| CS                                        |                |             |                 |                |       |                    | Interval: 1.4 feet                                                                    |
|                                           |                |             |                 |                |       |                    | GROUT                                                                                 |
|                                           |                |             |                 |                |       |                    | Type: NA<br>Interval: NA                                                              |
|                                           |                |             |                 |                |       |                    | SEAL                                                                                  |
|                                           |                |             |                 |                |       |                    | Type: BENTONITE                                                                       |
|                                           |                |             |                 |                |       |                    | Interval: 1.3 feet                                                                    |
|                                           |                |             |                 |                |       |                    | SANDPACK                                                                              |
|                                           |                |             |                 |                |       |                    | Type: Morie 0 and Morie 000                                                           |
|                                           |                |             |                 |                |       |                    | Interval: 3.0 feet                                                                    |
|                                           |                |             |                 |                |       |                    | WELL DEVELOPMENT DATA WATER LEVELS  Date: 10/23/95 Date Time Depth, Time              |
|                                           |                | ĺ           |                 |                |       |                    | Mathed Cores Plack                                                                    |
|                                           |                |             |                 |                |       |                    | Method: Surge block ▼ 10/24/95 1335 2.92 ft  Duration: 3 Days ▼ 10/24/95 1650 3.00 ft |
|                                           |                | į           |                 |                |       |                    | Rate: 1.020 L/minute 10/25/95 0830 3.29 ft                                            |
|                                           |                |             |                 |                |       |                    | Final Measurements:                                                                   |
|                                           |                |             |                 |                |       |                    | Temperature Conductivity pH (degrees C) (micromhos/cm) Turbidity (NTU)                |
|                                           |                |             |                 |                |       |                    | 7.11 14 920 25.1                                                                      |
|                                           |                |             |                 |                |       |                    |                                                                                       |
|                                           |                |             |                 |                |       |                    | LEGEND GRAVEL TPC TOP OF PROTECTIVE CASIN                                             |
|                                           |                |             |                 |                |       |                    |                                                                                       |
|                                           | İ              | l           |                 |                |       |                    | SEAL TBS TOP BENTONITE SEAL                                                           |
|                                           |                |             |                 |                |       |                    | GROUT SILT TSP TOP OF SANDPACK TSC TOP OF SCREEN                                      |
|                                           |                |             |                 |                |       |                    | BSC BOTTOM OF SCREEN                                                                  |
|                                           |                |             |                 |                |       |                    | POW POINT OF WELL                                                                     |
|                                           |                |             |                 |                |       | ļ                  | SANDPACK NO RECOVERY                                                                  |
|                                           | 1              | Į.          |                 |                |       | 1                  |                                                                                       |
|                                           |                |             |                 |                |       | 1                  |                                                                                       |

Seneca Army Depot

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 997866.1 750967.3

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

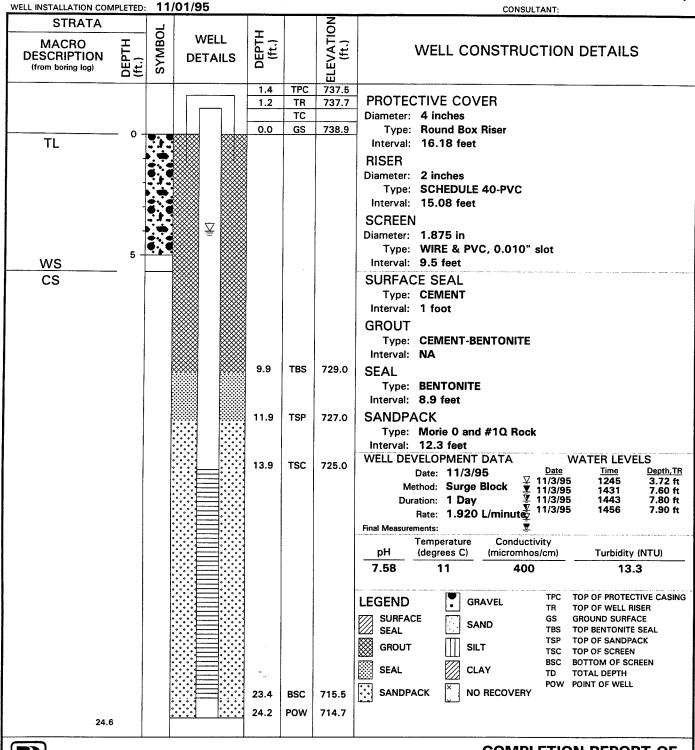
WELL INSTALLATION STARTED: 11/01/95

DRILLING METHOD: Rock Coring

GROUND SURFACE ELEVATION: 738.9 DATUM: NGVD 88

GEOLOGIST: F. O'Loughlin

CHECKED BY: P.Feschbach-Meriney



PARSONS

ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York

**COMPLETION REPORT OF** WELL No. MW25-12D

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 997866.5 750869.7

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

GROUND SURFACE ELEVATION: 737.9
DATUM: NGVD 88

DRILLING METHOD: Hollow Stem Auger

GEOLOGIST: F. O'Loughlin

WELL INSTALLATION STARTED: 10/11/95

CHECKED BY: P.Feschbach-Meriney

WELL INSTALLATION COMPLETED: 10/11/95 CONSULTANT:

| WELL INSTALLATION CON               | APLETED:       | 10/      | 11/95           |                | ,   |                    | CONSULTANT:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|----------------|----------|-----------------|----------------|-----|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STRATA                              |                |          |                 |                |     | NO                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| MACRO DESCRIPTION (from boring log) | DEPTH<br>(ft.) | SYMBOL   | WELL<br>DETAILS | DEPTH<br>(ft.) |     | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                     |                | ,<br>,   |                 |                |     | <u> </u>           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                     |                |          |                 | 1.8<br>1.7     | TPC | 736.2<br>736.3     | PROTECTIVE COVER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                     |                |          |                 | 1.7            | TC  | /30.3              | Diameter: 4 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                     |                |          |                 | 0.0            | GS  | 737.9              | Type: Round Box Riser                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| TL                                  | - 0-           | <b>.</b> |                 | 0.0            |     | 707.0              | Interval: 2.76 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>'</b>                            |                |          |                 | 1.0            | TBS | 736.9              | RISER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                     | Ī              |          |                 |                |     | 700.0              | Diameter: 2 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                     |                | - 4      |                 |                |     | 705.0              | Type: SCHEDULE 40-PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                     | -              |          |                 | 2.1            | TSP | 735.8              | Interval: 4.38 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                     |                |          |                 | 2.7            | TSC | 735.2              | SCREEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| ws                                  | -              |          |                 | 3.5            | BSC | 734.4              | Diameter: 2 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4.                                  | .0             |          |                 | 4.0            | POW | 733.9              | Type: SCH 40-PVC, 0.010" slot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| CS                                  |                |          |                 |                |     | . 55.5             | Interval: 0.8 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                     |                |          |                 |                |     |                    | SURFACE SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                     |                |          |                 |                |     |                    | Type: CEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                     |                |          |                 |                |     |                    | Interval: 1.4 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                     |                |          |                 |                |     |                    | GROUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                     |                |          |                 |                |     |                    | Type: NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                     |                |          |                 |                |     |                    | Interval: NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                     |                |          |                 |                |     |                    | SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                     |                |          |                 |                |     |                    | Type: BENTONITE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                     |                |          |                 |                |     |                    | Interval: 1.1 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4                                   | 1              |          |                 |                |     |                    | SANDPACK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                     |                |          |                 |                |     |                    | Type: Morie 0 and Morie 000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                     |                |          |                 |                |     |                    | Interval: 1.9 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                     |                |          |                 |                |     |                    | WELL DEVELOPMENT DATA WATER LEVELS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                     |                |          |                 |                |     |                    | Date: 10/25/95                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                     |                |          |                 |                |     |                    | Method: Surge Block ▼ 10/25/95 1035 4.46 ft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                     |                |          |                 |                |     |                    | Duration: 9 Days   ▼ 10/25/95 1202 4.69 ft  Rate: 0.050 L/minuts 10/30/95 1040 5.50 ft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                     |                |          |                 |                |     |                    | 10/31/95 1610 5.63 ft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                     |                |          |                 |                |     |                    | Final Measurements:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                     |                |          |                 |                |     |                    | pH (degrees C) (micromhos/cm) Turbidity (NTU)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                     |                |          |                 |                |     |                    | 7.10 14.0 1000 9.66                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                     |                |          |                 |                |     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                     |                |          |                 |                |     |                    | LEGEND GRAVEL TPC TOP OF PROTECTIVE CASING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                     |                |          |                 |                |     |                    | TR TOP OF WELL RISER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                     |                |          |                 |                |     |                    | SURFACE GS GROUND SURFACE TBS TOP BENTONITE SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                     |                |          |                 |                |     |                    | CROUT TSP TOP OF SANDPACK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                     |                |          |                 |                |     |                    | BSC BOTTOM OF SCREEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                     |                |          |                 |                |     |                    | SEAL CLAY TO TOTAL DEPTH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                     |                |          |                 |                |     |                    | SANDPACK NO RECOVERY POW POINT OF WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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|                                     |                |          |                 |                |     |                    | COMPLETION REPORT OF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                     |                | _        |                 |                |     |                    | CONTLETION REPORT OF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |



ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York COMPLETION REPORT OF WELL No. MW25-13

WELL No. MW25-14D

Sheet 1 of 1

## **COMPLETION REPORT OF WELL No. MW25-14D**

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 997866.5 750876.2 GROUND SURFACE ELEVATION: 738.2 DATUM: NGVD 88

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Rock Coring GEOLOGIST: F. O'Loughlin WELL INSTALLATION STARTED: 10/31/95 CHECKED BY: P.Feschbach-Meriney

| VELL INSTALLATION COM                     | PLETED:        | 10     | /31/95                                       |                |     |                    | CONSULTANT:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| STRATA                                    |                |        |                                              |                |     | Z                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| MACRO<br>DESCRIPTION<br>(from boring log) | DEPTH<br>(ft.) | SYMBOL | WELL<br>DETAILS                              | DEPTH<br>(ft.) |     | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                           |                |        |                                              | 1.8            | TPC | 736.4              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           |                |        |                                              | 1.6            | TR  | 736.6              | PROTECTIVE COVER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                           |                |        |                                              |                | TC  |                    | Diameter: 4 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | - 0 -          |        |                                              | 0.0            | GS  | 738.2              | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TL                                        |                |        |                                              | }              |     |                    | Interval: 12.39 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           | -              |        |                                              | {              |     |                    | RISER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           | _              | • •    | <b>                                     </b> | \$             |     |                    | Diameter: 2 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           |                | • 🗢    | ₩ ⋤ ₩                                        | }              |     |                    | Type: SCHEDULE 40-PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| WS                                        | _              |        | ₩ = ₩                                        | 1              |     |                    | Interval: 14.69 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           |                |        | <b>****</b>                                  |                |     |                    | SCREEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CS                                        | _              |        | <b>                                     </b> |                |     |                    | Diameter: 1.875 in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           |                |        |                                              | 8              |     |                    | Type: WIRE & PVC, 0.010" slot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                           |                |        | <b>****</b>                                  | \$             |     |                    | Interval: 9 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                           |                |        |                                              | 3              |     |                    | SURFACE SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                           |                |        | <b>                                     </b> | 1              |     |                    | Type: CEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                           |                |        | ₩ ₩                                          | <b>X</b>       |     |                    | Interval: 1 foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                           |                |        | <b>****</b>                                  | 1              |     |                    | GROUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           |                |        | <b>****</b>                                  | 9.2            | TBS | 729.0              | Type: CEMENT-BENTONITE Interval: 8.2 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                           |                |        |                                              | 0.2            |     | 725.0              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           |                |        |                                              |                |     |                    | SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           |                |        |                                              |                | TOD | 707.0              | Type: BENTONITE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           |                |        |                                              | 11.2           | TSP | 727.0              | Interval: 2.0 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           |                |        |                                              |                |     |                    | SANDPACK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                           |                |        |                                              | 13.1           | TSC | 725.1              | Type: Morie 0 and #1Q Rock Interval: 12 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                           |                |        |                                              | 13.1           | 130 | 725.1              | WELL DEVELOPMENT DATA WATER LEVELS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           |                |        |                                              |                |     |                    | Date: 11/2/95 Date Time Depth,TF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                           |                |        |                                              |                |     |                    | Method: Surge Block                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                           |                |        |                                              |                | ,   |                    | Duration: 2 Davs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                           |                |        |                                              |                |     |                    | Rate: <b>0.960 L/minute</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                           |                |        |                                              |                |     |                    | Final Measurements:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                           |                |        |                                              |                |     |                    | Temperature Conductivity pH (degrees C) (micromhos/cm) Turbidity (NTU)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                           |                |        |                                              |                |     |                    | 7.66 11 390 16.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                           |                |        |                                              |                |     |                    | 7.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           |                |        |                                              |                |     |                    | LECENID TPC TOP OF PROTECTIVE CASIN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| andropy in                                |                |        |                                              |                |     |                    | TR TOP OF WELL RISER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           |                |        |                                              |                |     |                    | SURFACE SEAL SAND GS GROUND SURFACE TBS TOP BENTONITE SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                           |                |        |                                              |                |     |                    | GROUT TSP TOP OF SANDPACK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| -                                         |                |        |                                              | 22.1           | BSC | 716.1              | TSC TOP OF SCREEN  SSC BOTTOM OF SCREEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                           |                |        |                                              | 44.1           | 530 | 710.1              | SEAL CLAY TO TOTAL DEPTH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                           | _              |        |                                              | 23.2           | POW | 715.0              | SANDPACK NO RECOVERY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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|                                           |                |        |                                              |                |     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           |                |        |                                              |                |     |                    | COMPLETION REPORT OF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           |                | _      |                                              |                |     |                    | OUTH LETTON INEL ONLY OF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

Seneca Army Depot

Romulus, New York

**ENGINEERING-SCIENCE, INC.** 

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 997974.2 750764.4 GROUND SURFACE ELEVATION: 739.6

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger

DATUM: NGVD 88 GEOLOGIST: F. O'Loughlin

WELL INSTALLATION STARTED: 10/10/95 CHECKED BY: P.Feschbach-Meriney

WELL INSTALLATION COMPLETED: 10/10/95

| WELL INSTALLATION COM         | IPLETED:       | 10/         | 10/95       |                | 7   |                    | CONSULTANT:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|----------------|-------------|-------------|----------------|-----|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STRATA                        |                | ا بر        |             |                |     | 6                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| MACRO                         | TH             | SYMBOL      | WELL        | DEPTH<br>(ft.) |     | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| DESCRIPTION (from boring log) | DEPTH<br>(ft.) | SYI         | DETAILS     | 四。             |     | LEV                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                               |                |             |             | 1.6            | TPC | 738.0              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                               |                |             |             | 1.4            | TR  | 738.2              | PROTECTIVE COVER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                               |                |             |             |                | TC  |                    | Diameter: 4 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                               | - o-           |             |             | 0.0            | GS  | 739.6              | Type: Round Box Riser                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| TL                            |                |             |             |                |     |                    | Interval: 3.22 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                               | -              |             |             |                |     |                    | RISER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                               |                | • , •       | <b>****</b> | 1.6            | TBS | 738.0              | Diameter: 2 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                               | 4              | •           |             |                |     |                    | Type: SCHEDULE 40-PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                               |                | <b>3:3</b>  |             |                |     |                    | Interval: 5.29 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                               | -              |             |             | 2.9            | TSP | 736.7              | SCREEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 1                             |                | <b>2</b> √2 |             | 2.0            | TCC | 725 7              | Diameter: 2 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 14/6                          | +              | 7,4         |             | 3.9            | TSC | 735.7              | Type: SCH 40-PVC, 0.010" slot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| WS                            |                |             |             |                |     |                    | Interval: 1.5 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                               | 5 -            |             |             | 5.4            | BSC | 734.2              | SURFACE SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                               | ļ              |             |             | 5.4<br>5.8     | POW | 734.2<br>733.8     | Type: CEMENT Interval: 1 foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6.                            | 2              |             |             | _              |     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| CS                            |                |             |             |                |     |                    | GROUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                               | İ              |             |             |                |     |                    | Type: NA<br>Interval: NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                               |                |             |             |                |     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                               |                |             |             |                |     |                    | SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                               |                |             |             |                |     |                    | Type: BENTONITE Interval: 1.3 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                               | 1              |             |             |                |     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                               | Ī              |             |             |                |     |                    | SANDPACK Type: Morie 0 and Morie 000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                               |                |             |             |                |     |                    | Interval: 2.9 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                               |                |             |             |                |     |                    | WELL DEVELOPMENT DATA WATER LEVELS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                               |                |             |             |                |     |                    | Date: 10/22/95 Date Time Depth,TR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                               |                |             |             |                |     |                    | Method: Surge Block                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                               |                | ŀ           |             |                |     |                    | Duration: 10 Days ¥ 10/30/95 1018 4.36 ft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                               |                |             |             |                |     |                    | Rate: 0.050 L/minute 11/1/95 1007 4.57 ft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                               |                |             |             |                |     |                    | Final Measurements:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                               |                |             |             |                |     |                    | Temperature Conductivity pH (degrees C) (micromhos/cm) Turbidity (NTU)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                               |                | [           |             |                |     |                    | 6.93 15.0 450 8.38                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                               |                |             |             |                |     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                               |                |             |             |                |     |                    | LEGEND GRAVEL TPC TOP OF PROTECTIVE CASING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                               |                |             |             |                |     |                    | TR TOP OF WELL RISER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                               |                |             |             |                |     |                    | SURFACE SEAL GS GROUND SURFACE TBS TOP BENTONITE SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                               |                |             |             |                |     |                    | GROUT TSP TOP OF SANDPACK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                               |                |             |             |                |     | İ                  | BSC ROTTOM OF SCREEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                               |                |             |             |                |     |                    | SEAL CLAY TO TOTAL DEPTH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                               |                |             |             |                |     |                    | SANDPACK NO RECOVERY POW POINT OF WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                               |                |             |             |                |     |                    | المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا المنا |
|                               |                |             |             |                |     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                               |                |             |             |                |     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                               |                |             |             |                |     |                    | COMPLETION REPORT OF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| PARS                          | DNS            | 3           |             | _              |     | _                  | WELL No. MW25-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |



ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York

**WELL No. MW25-15** 

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 997975.4 750773.2

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Rock Coring

WELL INSTALLATION STARTED: 10/25/95

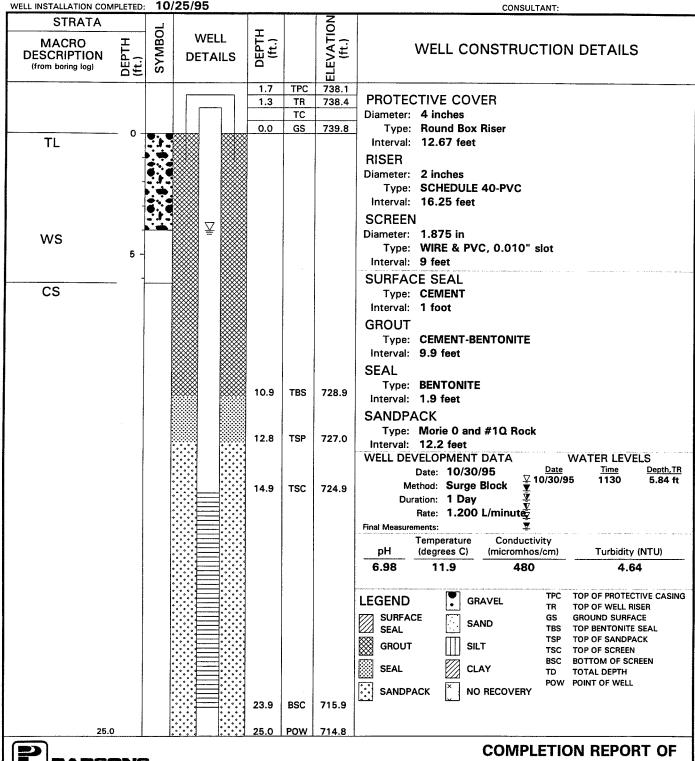
GROUND SURFACE ELEVATION: 739.8

DATUM: NGVD 88

GEOLOGIST: F. O'Loughlin

CHECKED BY: P.Feschbach-Meriney

10/25/95 CONSULTANT:



**PARSONS** 

ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York

WELL No. MW25-16D

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998187.6 750963.0

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger

WELL INSTALLATION STARTED: 10/16/95

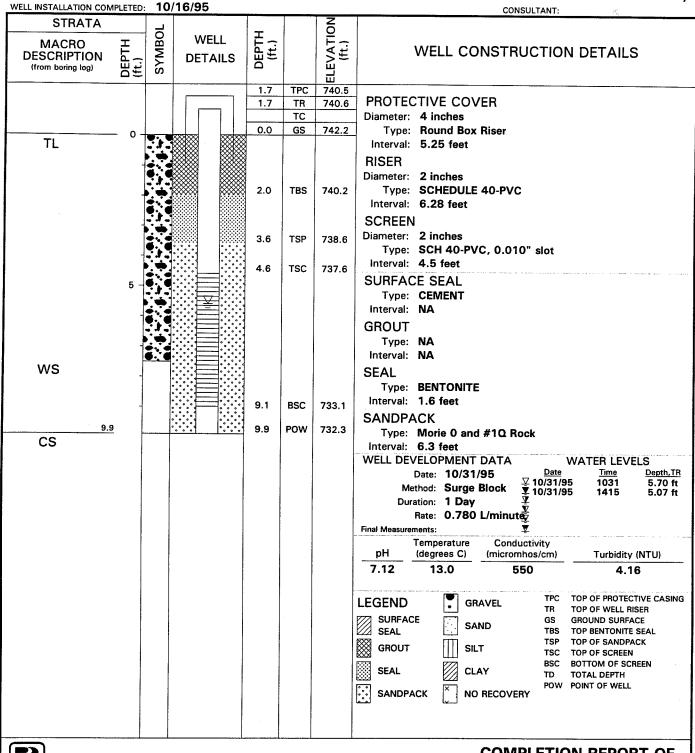
GROUND SURFACE ELEVATION: 742.2

DATUM: NGVD 88

GEOLOGIST: F. O'Loughlin

CHECKED BY: P.Feschbach-Merinev

CONSULTANT:



**PARSONS** 

ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York

**COMPLETION REPORT OF** WELL No. MW25-17

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998116.3 751082.0

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger

WELL INSTALLATION STARTED: 10/16/95

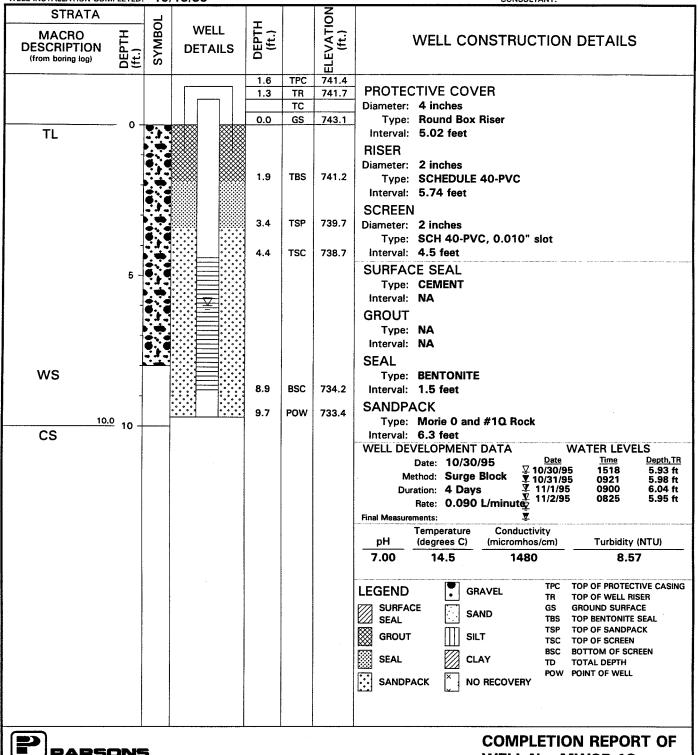
GROUND SURFACE ELEVATION: 743.1

DATUM: NGVD 88

GEOLOGIST: F. O'Loughlin

CHECKED BY: P.Feschbach-Meriney

10/16/95 WELL INSTALLATION COMPLETED: CONSULTANT:





ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York

**WELL No. MW25-18** 

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 998135.0 750762.5

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

GROUND SURFACE ELEVATION: 740.1

DATUM: NGVD 88 DRILLING METHOD: Hollow Stem Auger GEOLOGIST: F. O'Loughlin

WELL INSTALLATION STARTED: 10/07/95 CHECKED BY: P.Feschbach-Meriney

WELL INSTALLATION COMPLETED: 10/07/95 CONSULTANT:

| WELL INSTALLATION CO                      | OMPLETED | : 10,        | 07/95           |                |     |                    | CONSULTANT:                                                            |
|-------------------------------------------|----------|--------------|-----------------|----------------|-----|--------------------|------------------------------------------------------------------------|
| STRATA                                    |          |              |                 |                |     | Z                  |                                                                        |
| MACRO<br>DESCRIPTION<br>(from boring log) | 王        | SYMBOL       | WELL<br>DETAILS | DEPTH<br>(ft.) |     | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                              |
|                                           |          | <del> </del> |                 | 1.9            | TPC | 738.1              |                                                                        |
|                                           |          |              |                 | 1.9            | TR  | 738.2              | PROTECTIVE COVER                                                       |
|                                           |          |              |                 |                | TC  | 1                  | Diameter: 4 inches                                                     |
|                                           | •        |              |                 | 0.0            | GS  | 740.1              | Type: Round Box Riser                                                  |
| TL                                        | 0 -      |              |                 |                |     |                    | Interval: 3.95 feet                                                    |
| · <del>-</del>                            |          |              |                 |                |     |                    | RISER                                                                  |
|                                           |          | 2 2          | <b>****</b>     |                |     |                    | 1                                                                      |
|                                           |          |              | <b>****</b>     |                |     | 700.4              | Diameter: 2 inches Type: SCHEDULE 40-PVC                               |
|                                           |          |              |                 | 2.0            | TBS | 738.1              |                                                                        |
|                                           |          | Ŏ, Č         |                 |                |     | 1                  | Interval: 7.15 feet                                                    |
|                                           | -        |              |                 |                | 1   | 1                  | SCREEN                                                                 |
|                                           |          |              |                 |                |     |                    | Diameter: 1.875 in.                                                    |
|                                           |          |              |                 | 4.0            | TSP | 736.1              | Type: WIRE & PVC, 0.010" slot                                          |
|                                           |          | • 🗢          |                 |                |     |                    | Interval: 4.5 feet                                                     |
|                                           | 5 -      | 3:3          |                 | F ^            | TC0 | 70.0               | SURFACE SEAL                                                           |
|                                           | -        |              |                 | 5.3            | TSC | 734.8              | Type: CEMENT                                                           |
|                                           |          |              |                 |                |     |                    | Interval: NA                                                           |
|                                           |          | • •          |                 |                |     |                    | GROUT                                                                  |
|                                           |          |              |                 |                |     |                    | Type: NA                                                               |
|                                           | -        | 2.9          |                 |                |     |                    | Interval: NA                                                           |
|                                           |          |              |                 |                |     |                    |                                                                        |
| ws                                        | -        | \ <u></u>    |                 |                |     |                    | SEAL                                                                   |
| VVS                                       |          |              |                 |                |     |                    | Type: BENTONITE                                                        |
|                                           | -        |              |                 |                |     |                    | Interval: 2.0 feet                                                     |
|                                           |          |              |                 | 9.8            | BSC | 730.3              | SANDPACK                                                               |
| 10                                        | 0.2 10 - |              |                 | 10.2           | POW | 729.9              | Type: Morie 0 and Morie 000                                            |
| CS                                        |          |              |                 |                |     |                    | Interval: 6.2 feet                                                     |
|                                           |          |              |                 |                |     |                    | WELL DEVELOPMENT DATA WATER LEVELS                                     |
|                                           |          |              |                 |                |     |                    | Date: 10/22/95                                                         |
|                                           |          |              |                 |                |     |                    | Method: Surge Block <u>v</u>                                           |
|                                           |          |              |                 |                |     |                    | Duration: 1 Day $\frac{V}{V}$                                          |
|                                           |          |              |                 |                |     |                    | Rate: 0.780 L/minute                                                   |
|                                           |          |              |                 |                |     |                    | Final Measurements:                                                    |
|                                           |          |              |                 |                |     |                    | Temperature Conductivity pH (degrees C) (micromhos/cm) Turbidity (NTU) |
|                                           |          |              |                 |                |     |                    |                                                                        |
|                                           |          |              |                 |                |     |                    | 6.96 16 550 5.87                                                       |
|                                           |          |              |                 |                |     |                    | TOO TOO OF RECTFORM? OADNO                                             |
|                                           |          |              |                 |                |     |                    | LEGEND GRAVEL TPC TOP OF PROTECTIVE CASING                             |
|                                           |          |              |                 |                |     | ļ                  | SURFACE GS GROUND SURFACE                                              |
|                                           |          |              |                 |                |     |                    | SEAL TBS TOP BENTONITE SEAL                                            |
|                                           |          |              |                 |                |     |                    | GROUT SILT TSP TOP OF SANDPACK TSC TOP OF SCREEN                       |
|                                           |          |              |                 |                |     |                    | BSC BOTTOM OF SCREEN                                                   |
|                                           |          |              |                 |                |     |                    | SEAL CLAY TO TOTAL DEPTH                                               |
|                                           |          |              |                 |                |     |                    | SANDPACK NO RECOVERY                                                   |
|                                           |          |              |                 |                |     |                    | ONINDI NON                                                             |
|                                           |          |              |                 |                |     |                    |                                                                        |
|                                           |          |              | 1               |                |     |                    |                                                                        |
| <del></del>                               |          |              |                 | ,              |     |                    | COMPLETION DEPOSE OF                                                   |
| PARS                                      |          | =            |                 |                |     |                    | COMPLETION REPORT OF                                                   |
|                                           |          |              |                 | C              | ^   | P                  | well No. MW25-19                                                       |



ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 992227.7 751590.6 GROUND SI

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger

WELL INSTALLATION STARTED: 11/17/93

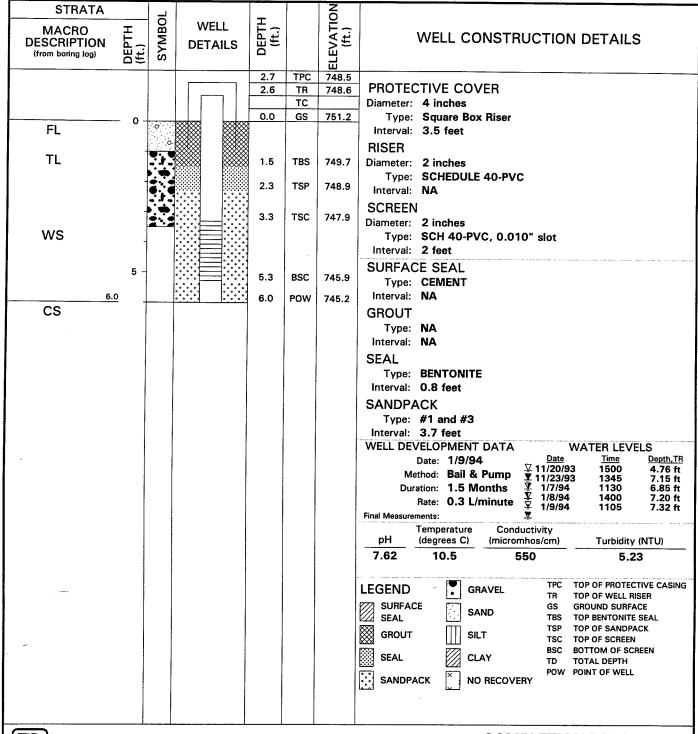
WELL INSTALLATION COMPLETED: 11/17/93

GROUND SURFACE ELEVATION: 751.2

DATUM: NGVD 88

GEOLOGIST: E. Schacht
CHECKED BY: F. O'Loughlin

CONSULTANT:





ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York COMPLETION REPORT OF WELL No. MW26-1

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 992768.1 751107.0

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger

WELL INSTALLATION STARTED: 11/18/93 11/18/93

WELL INSTALLATION COMPLETED:

PARSONS

ENGINEERING-SCIENCE, INC.

GROUND SURFACE ELEVATION: 753.8

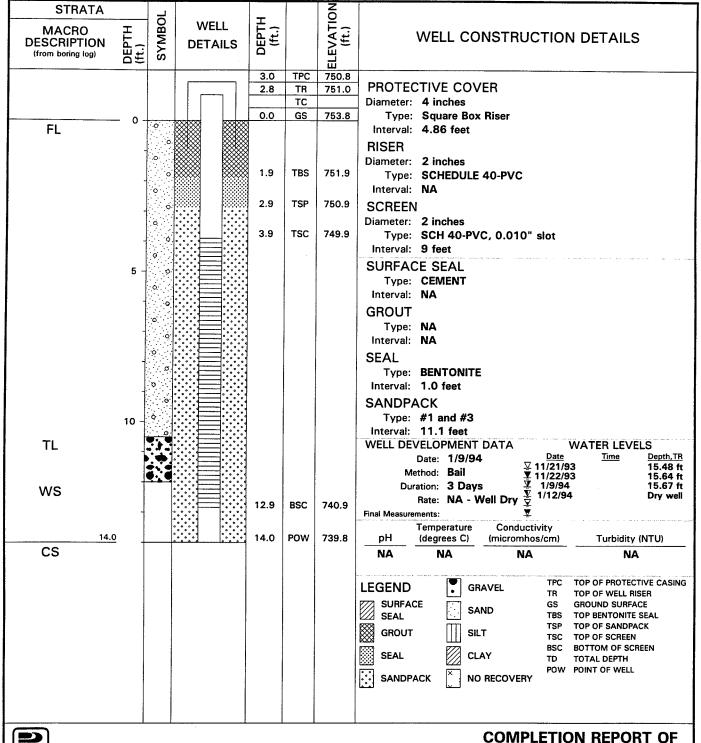
DATUM: NGVD 88

WELL No. MW26-2

Sheet 1 of 1

GEOLOGIST: E. Schacht CHECKED BY: F. O'Loughlin

CONSULTANT:



Seneca Army Depot

Romulus, New York

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 992216.8 751115.5

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

GROUND SURFACE ELEVATION: 751.5 DATUM: NGVD 88

DRILLING METHOD: Hollow Stem Auger

GEOLOGIST: E. Schacht

WELL INSTALLATION STARTED: 11/18/93

CHECKED BY: F. O'Loughlin CONSULTANT:

WELL INSTALLATION COMPLETED: 11/18/93

| WELL INSTALLATION CON         | VIPLE I ED:    | 1 1/    | 16/93                                  |                | _   |                    | CONSULTANT:                                   |
|-------------------------------|----------------|---------|----------------------------------------|----------------|-----|--------------------|-----------------------------------------------|
| STRATA                        |                |         |                                        |                |     | ELEVATION<br>(ft.) |                                               |
| MACDO                         | <del>-</del>   | SYMBOL  | WELL                                   | DEPTH<br>(ft.) | 1   | Ĕ_                 |                                               |
| MACRO                         | DEPTH<br>(ft.) | Ξ       |                                        | <u>.</u>       | 1   | ₹ #:               | WELL CONSTRUCTION DETAILS                     |
| DESCRIPTION (from boring log) | 급 (급           | ∑       | DETAILS                                | 四 )            |     | ≧ ⊂                |                                               |
| (from boining log)            | □ ±            | S       |                                        |                | i   | 出                  |                                               |
|                               |                |         |                                        | 2.7            | TPC | 748.8              |                                               |
|                               |                |         |                                        | 2.6            | TR  | 748.9              | PROTECTIVE COVER                              |
|                               |                |         |                                        |                | TC  |                    | Diameter: 4 inches                            |
|                               | _              |         |                                        | 0.0            | GS  | 751.5              | Type: Square Box Riser                        |
| FL                            | — o-           | - o     |                                        |                | 1   |                    | Interval: 4.55 feet                           |
| FL                            |                |         |                                        |                |     |                    |                                               |
|                               | 4              |         | XXX XXX                                |                |     |                    | RISER                                         |
|                               | }              | .0      | <b>****</b>                            |                |     |                    | Diameter: 2 inches                            |
|                               |                | · · · o | ************************************** | 1.8            | TBS | 749.7              | Type: SCHEDULE 40-PVC                         |
|                               | 1              |         |                                        |                |     |                    | Interval: NA                                  |
|                               |                |         |                                        | 2.8            | TSP | 748.7              |                                               |
|                               |                | 0.      |                                        |                |     |                    | SCREEN                                        |
|                               |                | Ö,      |                                        |                |     |                    | Diameter: 2 inches                            |
|                               |                | ó       |                                        |                |     |                    | Type: SCH 40-PVC, 0.010" slot                 |
|                               | 1              |         |                                        | 4.3            | TSC | 747.2              | Interval: 9 feet                              |
|                               |                | 0       |                                        |                |     |                    | SURFACE SEAL                                  |
|                               | 5 -            | 0       |                                        |                |     |                    |                                               |
|                               |                | ٥       |                                        |                |     |                    | Type: CEMENT                                  |
|                               |                |         |                                        |                |     |                    | Interval: NA                                  |
|                               |                |         |                                        |                |     |                    | GROUT                                         |
|                               | ŀ              | 0       |                                        |                |     |                    | Type: CEMENT-BENTONITE                        |
|                               | 1              | 0.      |                                        |                |     |                    | Interval: 1.8 feet                            |
|                               | [              | · 6     |                                        |                |     |                    |                                               |
| 1                             | +              |         |                                        |                |     |                    | SEAL                                          |
|                               | ŀ              |         |                                        |                |     |                    | Type: BENTONITE                               |
|                               | 1              | 0       |                                        |                | ł   |                    | Interval: 1.0 feet                            |
|                               | ľ              | 0.      |                                        |                |     |                    | SANDPACK                                      |
|                               |                | · 6     |                                        |                |     |                    | Type: #1 and #3                               |
| TL                            | 10             | 9,4     | ⋯≔≕⋯                                   |                |     |                    | Interval: 11.2 feet                           |
| I L                           |                |         |                                        |                |     |                    | WELL DEVELOPMENT DATA WATER LEVELS            |
|                               | -[.            |         | ****                                   |                |     |                    |                                               |
|                               | 1              | ė., e   |                                        |                | -   |                    | 7 44/20/20 4040                               |
|                               |                |         |                                        |                |     |                    | Method: Bail & Pump ¥ 11/20/93 1635 11.76 ft  |
| ws                            | T              |         |                                        |                |     |                    | Duration: 1 Day                               |
| 110                           |                |         |                                        |                |     |                    | Rate: 1.26 L/minute 💆                         |
|                               | +              |         |                                        | 13.3           | BSC | 738.2              | Final Measurements:                           |
|                               |                |         |                                        |                |     |                    | Temperature Conductivity                      |
| 14.                           | <u>.o</u>      |         |                                        | 14.0           | POW | 737.5              | pH (degrees C) (micromhos/cm) Turbidity (NTU) |
| CS                            |                |         |                                        |                |     |                    | 6.64 11 700 5.32                              |
| <u>.</u>                      |                |         |                                        |                |     |                    |                                               |
|                               |                |         |                                        |                |     |                    | TPC TOP OF PROTECTIVE CASING                  |
|                               |                |         |                                        |                |     |                    | LEGEND GRAVEL TR TOP OF WELL RISER            |
|                               |                |         |                                        |                |     |                    | SURFACE GS GROUND SURFACE                     |
|                               |                |         |                                        |                |     |                    | SEAL TBS TOP BENTONITE SEAL                   |
|                               |                |         |                                        |                | }   |                    | GROUT TSP TOP OF SANDPACK TSC TOP OF SCREEN   |
|                               |                |         |                                        |                | }   |                    |                                               |
|                               |                |         |                                        |                |     |                    | SEAL CLAY BSC BOTTOM OF SCREEN TD TOTAL DEPTH |
|                               |                |         |                                        |                |     |                    | BOW BOINT OF WELL                             |
|                               |                |         |                                        |                | 1   |                    | SANDPACK NO RECOVERY                          |
|                               |                | ]       |                                        |                |     |                    | <u>                                    </u>   |
|                               |                |         |                                        |                |     |                    |                                               |
|                               |                |         |                                        |                |     |                    |                                               |
|                               |                |         |                                        |                |     |                    |                                               |
|                               |                |         |                                        |                |     |                    | COMPLETION REPORT OF                          |



ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York

COMPLETION REPORT OF WELL No. MW26-3

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 991690.8 751126.3

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger

WELL INSTALLATION STARTED: 11/19/93

PARSONS

**ENGINEERING-SCIENCE, INC.** 

GROUND SURFACE ELEVATION: 750.1

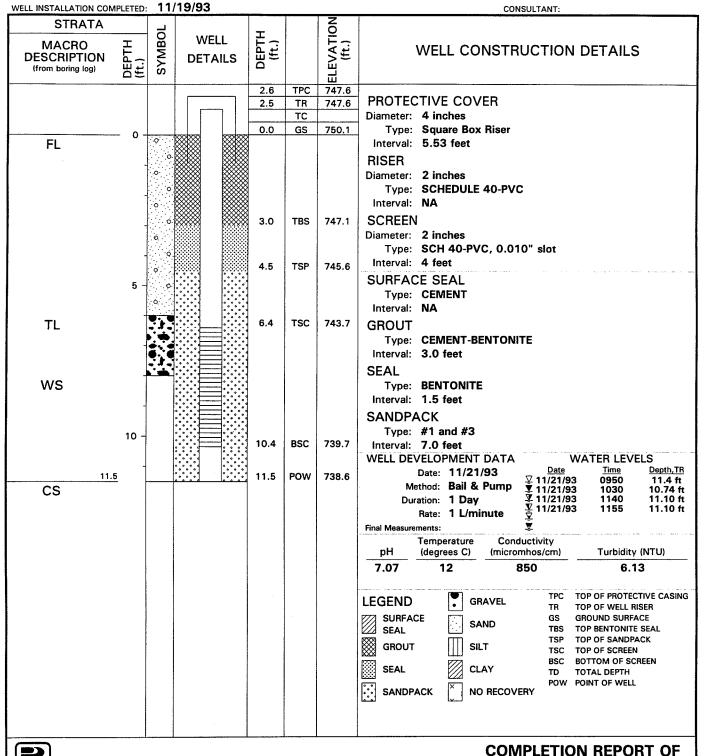
DATUM: NGVD 88

GEOLOGIST: E. Schacht

CHECKED BY: F. O'Loughlin

WELL No. MW26-4

Sheet 1 of 1



Seneca Army Depot

Romulus, New York

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 992271.2 751169.2

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

GROUND SURFACE ELEVATION: 754.6 DATUM: NGVD 88

DRILLING METHOD: Hollow Stem Auger

GEOLOGIST: F. O'Loughlin

WELL INSTALLATION STARTED: 09/24/95 CHECKED BY: P.Feschbach-Meriney 09/24/95 WELL INSTALLATION COMPLETED: CONSULTANT: **STRATA** EVATION (ft.) DEPTH (ft.) SYMBO WELL **MACRO** WELL CONSTRUCTION DETAILS DEPTI (ft.) DESCRIPTION **DETAILS** (from boring log) 핍 2.4 TPC 752.3 PROTECTIVE COVER 2.1 TR 752.6 Diameter: 4 inches TC GS Type: Square Box Riser 0.0 754.6 Interval: 4.9 feet FL RISER ٥. Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 6.8 feet o 2.5 TBS 752.1 **SCREEN** Diameter: 2 inches 3.8 **TSP** 750.8 Type: SCH 40-PVC, 0.010" slot Interval: 8.95 feet 4.9 TSC 749.7 SURFACE SEAL 5 Type: CEMENT Interval: NA **GROUT** Type: NA Interval: NA **SEAL** Type: BENTONITE TL Interval: 1.3 feet **SANDPACK** Type: Morie 0 and Morie 000 Interval: 10.05 feet WS WELL DEVELOPMENT DATA WATER LEVELS Date Time Depth,TR Date: 10/19/95 <sup>™</sup> 10/17/95 1514 12.66 ft Method: Surge Block ¥ 10/18/95 ¥ 10/18/95 1128 12.68 ft Duration: 3 Days 1253 13.57 ft ¥ 10/18/95 12.74 ft 1712 Rate: 0.24 L/minute Final Measurements: Temperature Conductivity 13.9 **BSC** 740.8 Turbidity (NTU) pН (degrees C) (micromhos/cm) 6.55 15.5 925 8.5 15.0 15 15.0 POW 739.6 CS TOP OF PROTECTIVE CASING GRAVEL **LEGEND** TOP OF WELL RISER TR GROUND SURFACE SURFACE GS SAND TBS TOP BENTONITE SEAL SEAL TOP OF SANDPACK TSP GROUT SILT TOP OF SCREEN TSC BOTTOM OF SCREEN BSC SEAL CLAY TD TOTAL DEPTH POW POINT OF WELL SANDPACK NO RECOVERY



ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York

**COMPLETION REPORT OF** WELL No. MW26-5

Sheet 1 of 1

### COMPLETION REPORT OF WELL No. MW26-6

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 992233.8 751252.0

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

09/23/95

DRILLING METHOD: Hollow Stem Auger

ENGINEERING-SCIENCE, INC.

09/23/95 WELL INSTALLATION STARTED:

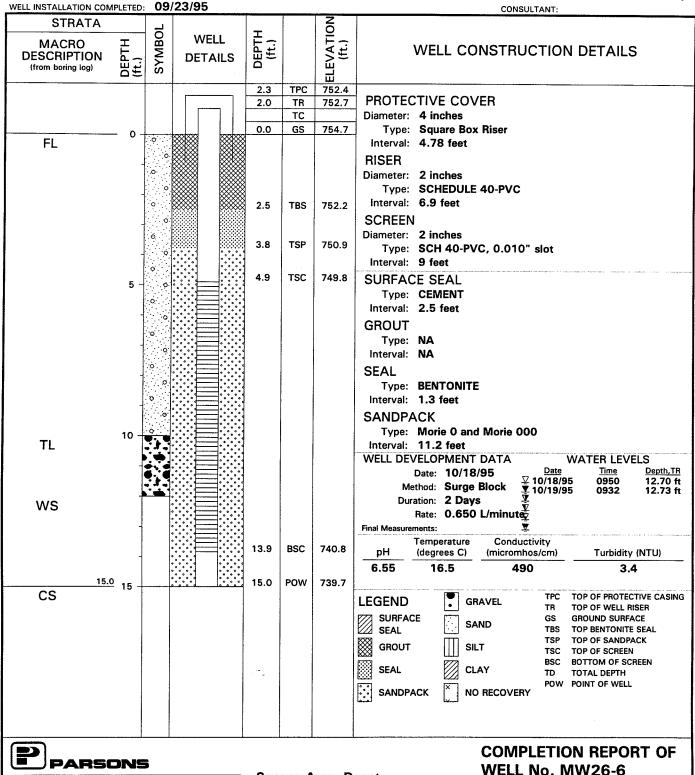
GROUND SURFACE ELEVATION: 754.7

DATUM: NGVD 88

GEOLOGIST: F. O'Loughlin

CHECKED BY: P.Feschbach-Meriney

CONSULTANT:



Seneca Army Depot

Romulus, New York

DATUM: NGVD 88

#### COMPLETION REPORT OF WELL No. MW26-7

PROJECT: SEAD-25 & SEAD-26 RI/FS

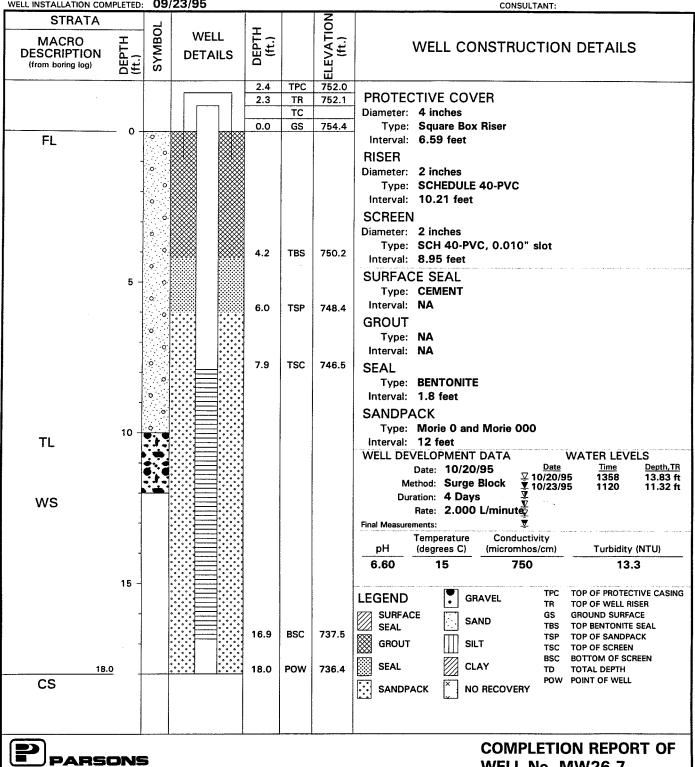
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 992178.9 751194.1 GROUND SURFACE ELEVATION: 754.4

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger GEOLOGIST: F. O'Loughlin WELL INSTALLATION STARTED: 09/23/95 CHECKED BY: P.Feschbach-Meriney

WELL INSTALLATION COMPLETED: 09/23/95 CONSULTANT:





ENGINEERING-SCIENCE, INC.

Seneca Army Depot Romulus, New York

WELL No. MW26-7

Sheet 1 of 1

#### COMPLETION REPORT OF WELL No. MW26-8

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 991754.6 751203.8 GROUND SURFACE ELEVATION: 750.5

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

ire Soils Investigation, Inc. DATUM: NGVD 88

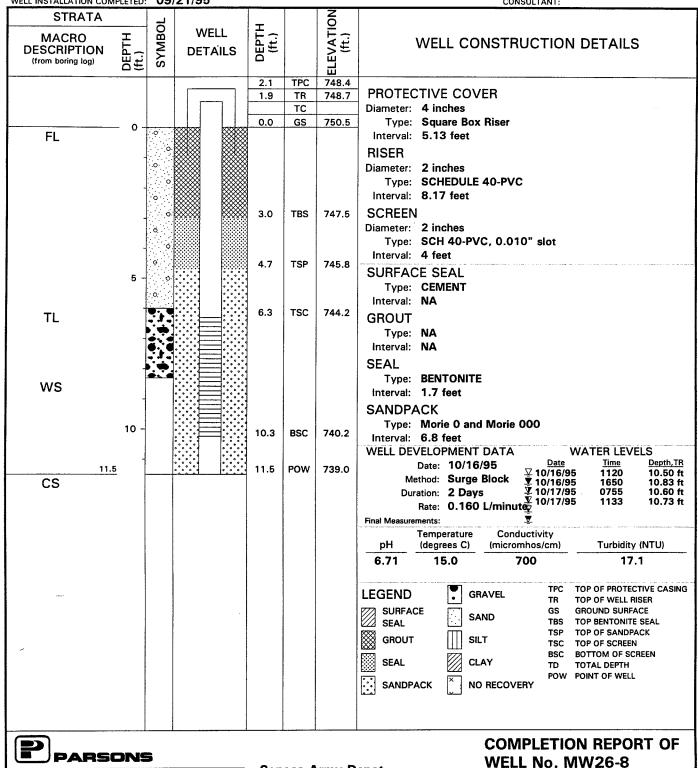
DRILLING METHOD: Hollow Stem Auger WELL INSTALLATION STARTED: 09/21/95

ENGINEERING-SCIENCE, INC.

GEOLOGIST: F. O'Loughlin
CHECKED BY: P.Feschbach-Meriney

WELL INSTALLATION COMPLETED: 09/21/95

CONSULTANT:



Seneca Army Depot

Romulus, New York

DATUM: NGVD 88

#### **COMPLETION REPORT OF WELL No. MW26-9**

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 991722.5 751224.7 GROUND SURFACE ELEVATION: 750.9

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

GEOLOGIST: F. O'Loughlin DRILLING METHOD: Hollow Stem Auger CHECKED BY: P.Feschbach-Meriney WELL INSTALLATION STARTED: 09/25/95

| LL INSTALLATION COM                 |                |        |                 |                |          | Z                  |                                                               |
|-------------------------------------|----------------|--------|-----------------|----------------|----------|--------------------|---------------------------------------------------------------|
| MACRO DESCRIPTION (from boring log) | DEPTH<br>(ft.) | SYMBOL | WELL<br>DETAILS | DEPTH<br>(ft.) |          | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                     |
|                                     |                |        |                 | 2.2            | TPC      | 748.6              | PROTECTIVE COVER                                              |
|                                     |                |        |                 | 2.1            | TR<br>TC | 748.8              | Diameter: 4 inches                                            |
|                                     |                |        |                 | 0.0            | GS       | 750.9              | Type: Square Box Riser                                        |
| FL                                  | - 0-           | O      |                 |                |          |                    | Interval: 5.25 feet                                           |
| . –                                 |                | 0      |                 |                |          |                    | RISER                                                         |
|                                     |                | 0      |                 |                |          |                    | Diameter: 2 inches                                            |
|                                     | _              | 0      |                 |                |          |                    | Type: SCHEDULE 40-PVC                                         |
|                                     |                | 0      |                 |                |          |                    | Interval: 9.14 feet                                           |
|                                     | -              | 0      |                 | 3.0            | TBS      | 747.9              | SCREEN                                                        |
|                                     |                | Ó      |                 |                |          |                    | Diameter: 2 inches                                            |
|                                     | 4              | . 0    |                 |                |          |                    | Type: SCH 40-PVC, 0.010" slot Interval: 4 feet                |
|                                     |                | φ .    |                 | 5.0            | TSP      | 745.9              | SURFACE SEAL                                                  |
|                                     | 5 -            | 0      |                 | 5.0            | Tor      | 745.5              | Type: CEMENT                                                  |
|                                     |                | 0      |                 |                |          |                    | Interval: NA                                                  |
| TL                                  | f              | •      |                 |                |          |                    | GROUT                                                         |
| . —                                 |                | •      |                 | 7.1            | TSC      | 743.8              | Type: NA                                                      |
|                                     | 1              | ĕ, ĕ   |                 |                |          |                    | Interval: NA                                                  |
|                                     |                |        |                 |                |          |                    | SEAL                                                          |
| WS                                  |                | ļ      |                 |                |          |                    | Type: BENTONITE                                               |
|                                     | 4              |        |                 |                |          |                    | Interval: 2.0 feet                                            |
|                                     |                |        |                 |                |          |                    | SANDPACK                                                      |
|                                     | 10 -           |        |                 |                |          |                    | Type: Morie 0 and Morie 000 Interval: 7.2 feet                |
|                                     |                |        |                 | 11.4           | DCC.     | 720.0              | WELL DEVELOPMENT DATA WATER LEVELS                            |
| •                                   | -              |        |                 | 11.1           | BSC      | 739.8              | Date: 10/16/95 <u>Date Time</u> <u>Depth,Ti</u>               |
|                                     |                |        |                 | 400            | DC:+1    | 700 7              | Method: Surge Block ▼ 10/16/95 1552 10.98 t                   |
| 12.                                 | <u>∠</u> 1     |        | o``o°`o°`d      | 12.2           | POW      | 738.7              | Duration: 1 Day $\frac{V}{V}$ Rate: 0.280 L/minute            |
| CS                                  |                |        |                 |                |          |                    | Final Measurements:                                           |
|                                     |                |        |                 |                |          |                    | Temperature Conductivity                                      |
|                                     |                |        |                 |                |          |                    | pH (degrees C) (micromhos/cm) Turbidity (NTU)                 |
|                                     |                |        |                 |                |          |                    | 6.90 13.75 625 8.38                                           |
|                                     |                |        |                 |                |          |                    | LECEND PROTECTIVE CASIN                                       |
|                                     |                |        |                 |                |          |                    | LEGEND GRAVEL TR TOP OF WELL RISER  SURFACE GS GROUND SURFACE |
|                                     |                |        |                 |                |          |                    | SEAL TBS TOP BENTONITE SEAL                                   |
|                                     |                |        |                 |                |          |                    | GROUT TSP TOP OF SANDPACK TSC TOP OF SCREEN                   |
|                                     |                |        |                 |                |          |                    | BSC BOTTOM OF SCREEN                                          |
|                                     |                |        |                 |                |          |                    | SEAL CLAY TD TOTAL DEPTH POW POINT OF WELL                    |
|                                     |                |        |                 |                |          |                    | SANDPACK NO RECOVERY                                          |
|                                     |                |        |                 |                |          |                    |                                                               |
|                                     |                |        |                 |                |          |                    |                                                               |
|                                     |                |        |                 |                |          |                    | COMPLETION REPORT OF                                          |



**ENGINEERING-SCIENCE, INC.** 

Seneca Army Depot Romulus, New York

WELL No. MW26-9

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 991652.5 751206.3 GROUND SURFACE ELEVATION: 751.5 DATUM: NGVD 88

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger GEOLOGIST: F. O'Loughlin WELL INSTALLATION STARTED: 09/20/95 CHECKED BY: P.Feschbach-Meriney

| WELL INSTALLATION CON                     | MPLETED:         | 09          | /20/95                                       |                |          |                    | CONSULTANT:                                                      |
|-------------------------------------------|------------------|-------------|----------------------------------------------|----------------|----------|--------------------|------------------------------------------------------------------|
| STRATA                                    |                  |             |                                              |                |          | NO                 |                                                                  |
| MACRO<br>DESCRIPTION<br>(from boring log) | DEPTH<br>(ft.)   | SYMBOL      | WELL<br>DETAILS                              | DEPTH<br>(ft.) |          | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                        |
|                                           |                  |             |                                              | 2.0            | TPC      | 749.5              | PROTECTIVE COVER                                                 |
|                                           |                  |             |                                              | 1.8            | TR       | 749.7              | PROTECTIVE COVER                                                 |
|                                           |                  |             |                                              | 0.0            | TC<br>GS | 751.5              | Diameter: 4 inches Type: Square Box Riser                        |
| FL                                        | — o <del> </del> | . 0         |                                              | 0.0            | us       | 751.5              | Interval: 3.95 feet                                              |
| 1 L                                       |                  | 0           |                                              |                |          |                    | RISER                                                            |
|                                           | 1                | 0           | <b>****</b>                                  |                |          |                    | Diameter: 2 inches                                               |
|                                           |                  | ٥           | <b>                                     </b> | 2.0            | TBS      | 749.5              | Type: SCHEDULE 40-PVC                                            |
|                                           | 1                | 0           |                                              |                |          |                    | Interval: 6.10 feet                                              |
|                                           |                  | ó           |                                              | 3.2            | TSP      | 748.3              | SCREEN                                                           |
|                                           |                  | Ö,          |                                              | 3.2            | 13,      | 740.3              | Diameter: 2 inches                                               |
|                                           | _                | o           |                                              | 4.3            | TSC      | 747.2              | Type: SCH 40-PVC, 0.010" slot                                    |
|                                           |                  | ¢ .         |                                              | 4.3            | 130      | /4/.2              | Interval: 6.9 feet                                               |
|                                           | 5 -              | ø           |                                              |                |          |                    | SURFACE SEAL Type: CEMENT                                        |
|                                           |                  | 0           |                                              |                |          |                    | Interval: NA                                                     |
|                                           | 4                | 0           |                                              |                |          |                    | GROUT                                                            |
|                                           | ľ                | 0           |                                              |                |          |                    | Type: NA                                                         |
| TL                                        | 1                |             |                                              |                |          |                    | Interval: NA                                                     |
|                                           |                  |             |                                              |                |          |                    | SEAL                                                             |
|                                           |                  | <u>•</u> ;• |                                              |                |          |                    | Type: BENTONITE                                                  |
| WS                                        | -                |             |                                              |                |          |                    | Interval: 1.2 feet                                               |
|                                           |                  |             |                                              |                |          |                    | SANDPACK                                                         |
|                                           | 10 -             |             |                                              |                |          |                    | Type: Morie 0 and Morie 000 Interval: 8.3 feet                   |
|                                           |                  |             |                                              |                |          |                    | WELL DEVELOPMENT DATA WATER LEVELS                               |
|                                           | 1                |             |                                              | 11.2           | BSC      | 740.3              | Date: 10/16/95 <u>Date Time Depth,TR</u> ✓ 10/16/95 1504 9.83 ft |
| 12.                                       | .0               |             |                                              | 12.0           | POW      | 739.5              | Method: Surge Block ¥ 10/23/95 0830 8.12 ft                      |
| CS                                        |                  |             |                                              |                |          |                    | Duration: 9 Days \frac{\frac{T}{V}}{V}  Rate: 0.100 L/minutes    |
|                                           |                  |             |                                              |                |          |                    | Final Measurements:                                              |
|                                           |                  |             |                                              |                |          |                    | Temperature Conductivity                                         |
|                                           |                  |             |                                              |                |          |                    | pH (degrees C) (micromhos/cm) Turbidity (NTU)                    |
|                                           |                  |             |                                              |                |          |                    | 7.25 15.6 1250 3.41                                              |
|                                           |                  |             |                                              |                |          |                    | LECENID TPC TOP OF PROTECTIVE CASING                             |
|                                           |                  |             |                                              |                |          |                    | LEGEND GRAVEL TR TOP OF WELL RISER                               |
|                                           |                  |             |                                              |                |          |                    | SURFACE SAND GS GROUND SURFACE TBS TOP BENTONITE SEAL            |
|                                           |                  |             |                                              |                |          |                    | GROUT SILT TSP TOP OF SANDPACK TSC TOP OF SCREEN                 |
|                                           |                  |             |                                              |                |          |                    | BSC BOTTOM OF SCREEN                                             |
|                                           |                  |             |                                              |                |          |                    | POW POINT OF WELL                                                |
|                                           |                  |             |                                              |                |          |                    | SANDPACK NO RECOVERY                                             |
|                                           |                  |             |                                              |                |          |                    |                                                                  |
|                                           |                  |             |                                              |                |          |                    |                                                                  |
| PARS                                      |                  | 5           |                                              |                |          |                    | COMPLETION REPORT OF                                             |



**ENGINEERING-SCIENCE, INC.** 

Seneca Army Depot Romulus, New York

**WELL No. MW26-10** 

PROJECT: SEAD-25 & SEAD-26 RI/FS

PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541

WELL LOCATION (N/E): 992690.3 751235.7

DRILLING CONTRACTOR: Empire Soils Investigation, Inc.

DRILLING METHOD: Hollow Stem Auger

WELL INSTALLATION STARTED: 10/19/95 WELL INSTALLATION COMPLETED: 10/19/95

GROUND SURFACE ELEVATION: 754.9

DATUM: NGVD 88

GEOLOGIST: F. O'Loughlin

CHECKED BY: P.Feschbach-Meriney

CONSULTANT:

| WELL INSTALLATION COM                     | PLETED:          | 10/         | 19/95                                 |                |     |                    | CONSULTANT:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------|------------------|-------------|---------------------------------------|----------------|-----|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STRATA                                    |                  |             |                                       |                |     | N                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| MACRO<br>DESCRIPTION<br>(from boring log) | DEPTH<br>(ft.)   | SYMBOL      | WELL<br>DETAILS                       | DEPTH<br>(ft.) |     | ELEVATION<br>(ft.) | WELL CONSTRUCTION DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                           |                  |             |                                       | 1.5            | TPC | 753.5              | DROTECTIVE COVED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                           |                  |             |                                       | 1.4            | TR  | 753.6              | PROTECTIVE COVER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                           |                  |             |                                       |                | TC  |                    | Diameter: 4 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | - o <del> </del> | 0           |                                       | 0.0            | GS  | 754.9              | Type: Square Box Riser                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| FL                                        |                  |             |                                       |                |     |                    | Interval: 3.37 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                           | 4                |             | <b>****</b>                           |                |     |                    | RISER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           |                  | 0           | <b>****</b>                           |                |     |                    | Diameter: 2 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | _                | 0           | *****                                 | 1.9            | TBS | 753.0              | Type: SCHEDULE 40-PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           |                  | 0           |                                       |                |     |                    | Interval: 6.08 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                           | _                | o           |                                       |                |     |                    | SCREEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| }                                         |                  | ō           |                                       | 3.7            | TSP | 751.2              | Diameter: 2 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           |                  | 0           |                                       | J.,            | '   | 701.2              | Type: SCH 40-PVC, 0.010" slot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                           |                  | 0           |                                       | 4.7            | TSC | 750.2              | Interval: 9.5 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | 5 -              |             |                                       | Ţ.,            | .50 | ,00.2              | SURFACE SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                           | J                |             |                                       |                |     |                    | Type: CEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                           |                  |             |                                       | }              |     |                    | Interval: NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                           | 1                | ۰۰          |                                       | }              |     |                    | GROUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           | -                | .0          |                                       | }              |     |                    | Type: NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                           | 1                | 0           |                                       | }              |     |                    | Interval: NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                           |                  | · o         |                                       | ]              |     |                    | SEAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           | 1                | ø           |                                       | }              |     |                    | Type: BENTONITE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           |                  | ο           |                                       | }              |     |                    | Interval: 1.8 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           |                  | o           |                                       | ]              |     |                    | SANDPACK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                           |                  |             |                                       |                |     |                    | Type: Morie 0 and Morie 000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                           | 10 -             |             |                                       | }              |     |                    | Interval: 11.3 feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                           |                  |             |                                       | }              |     |                    | WELL DEVELOPMENT DATA WATER LEVELS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | 1                |             |                                       | }              |     |                    | Date: 10/22/95                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                           |                  |             |                                       | }              |     |                    | Method: Surge Block                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| TL                                        | -                | ب ب         |                                       | }              |     |                    | Duration: 1 Day $\frac{\nabla}{\nabla}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 1 1 1                                     |                  |             |                                       | •              |     |                    | Rate: 0.300 L/minutes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           | -                | <b>:</b> :: |                                       | 4              |     |                    | Final Measurements:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ws                                        |                  |             |                                       | 1              |     |                    | Temperature Conductivity pH (degrees C) (micromhos/cm) Turbidity (NTU)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                           | 4                |             |                                       | 14.2           | BSC | 740.7              | 7.20 16.1 780 8.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           |                  |             |                                       | 1              | DOW | 7000               | 7.20 10.1 700 0.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| CC 15.                                    | <u>0</u> 15 -    |             | • • • • • • • • • • • • • • • • • • • | 15.0           | POW | 739.9              | TPC TOP OF PROTECTIVE CASING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| CS                                        |                  |             |                                       |                |     |                    | LEGEND GRAVEL TR TOP OF WELL RISER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           |                  |             |                                       |                |     |                    | SURFACE SAND GS GROUND SURFACE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                           |                  |             |                                       |                |     |                    | SEAL TOP DE CAMPBACK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           |                  |             |                                       |                |     | 1                  | GROUT SILT TSC TOP OF SCREEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                           |                  |             |                                       |                |     |                    | SEAL CLAY BSC BOTTOM OF SCREEN TD TOTAL DEPTH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                           |                  |             |                                       |                |     |                    | POW POINT OF WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                           |                  |             |                                       |                | .   |                    | SANDPACK NO RECOVERY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           |                  |             |                                       |                |     |                    | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |
|                                           |                  |             |                                       |                |     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           |                  |             |                                       | <u></u>        |     | L                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           |                  |             |                                       |                |     |                    | COMPLETION REPORT OF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

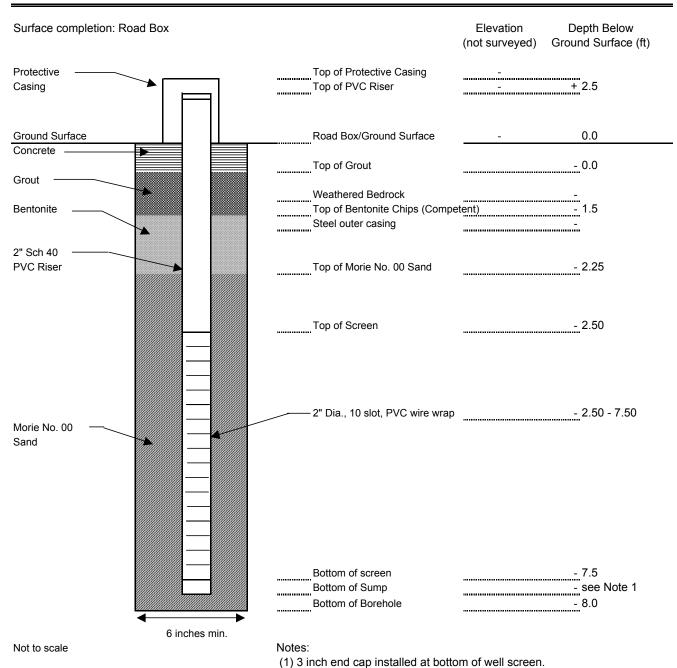


ENGINEERING-SCIENCE, INC.

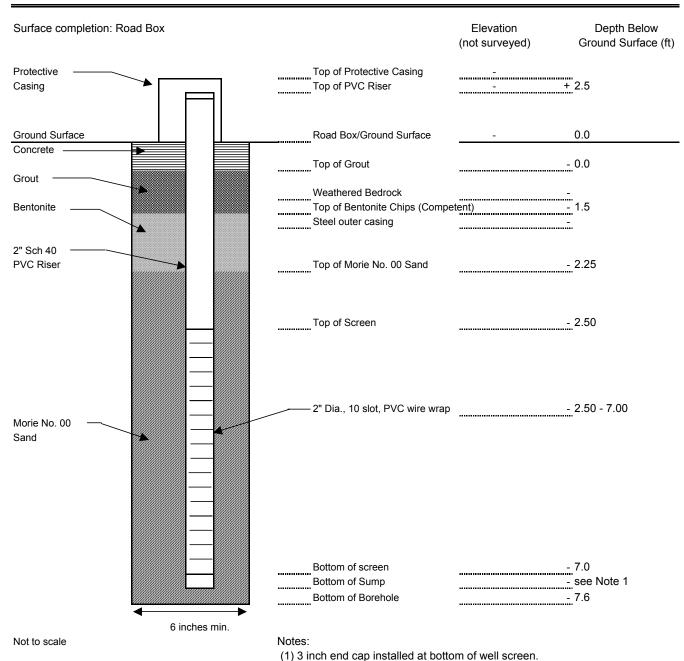
Seneca Army Depot Romulus, New York

**WELL No. MW26-11** 

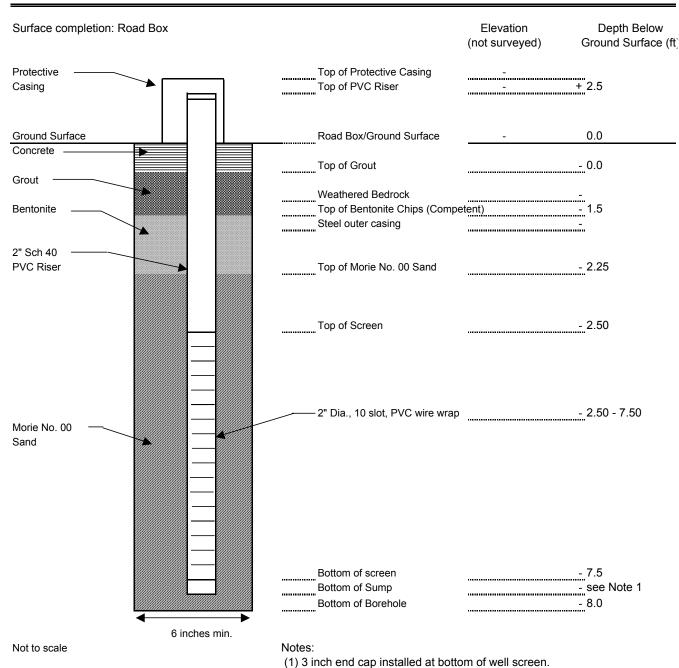
Project:SEAD-48Drilling Contractor:Lyon Drilling, Inc.Well Number:MW48-1Date Started:8/18/2003Geologist:E. AshtonDate Completed:8/18/2003



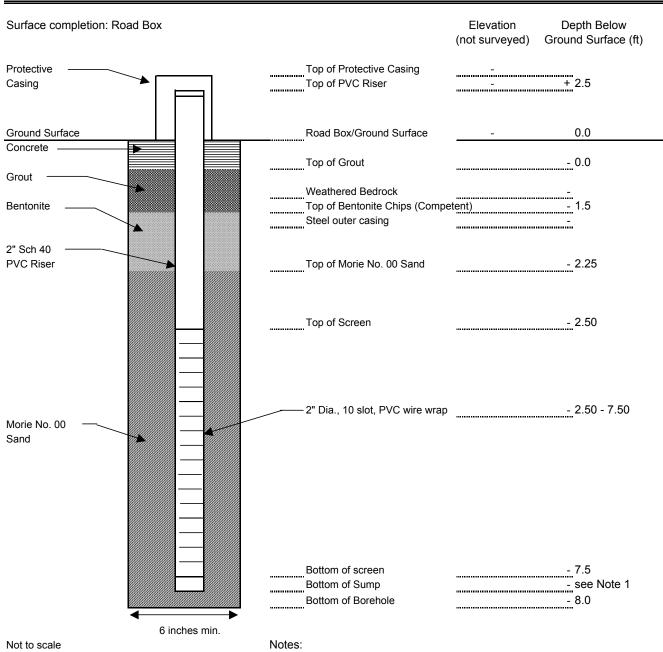
Project:SEAD-48Drilling Contractor:Lyon Drilling, Inc.Well Number:MW48-2Date Started:8/19/2003Geologist:E. AshtonDate Completed:



Project:SEAD-48Drilling Contractor:Lyon Drilling, Inc.Well Number:MW48-3Date Started:8/13/2003Geologist:E. AshtonDate Completed:8/13/2003



Project:SEAD-48Drilling Contractor:Lyon Drilling, Inc.Well Number:MW48-4Date Started:8/13/2003Geologist:E. AshtonDate Completed:8/13/2003



(1) 3 inch end cap installed at bottom of well screen.

Project: SEAD-48 **Drilling Contractor:** Lyon Drilling, Inc. **Date Started:** Well Number: MW48-5 8/18/2003 Geologist: E. Ashton **Date Completed:** 8/18/2003 Surface completion: Road Box Elevation Depth Below Ground Surface (ft) (not surveyed) Top of Protective Casing Protective Top of PVC Riser Casing **Ground Surface** Road Box/Ground Surface Concrete Top of Grout - 0.0 Grout Weathered Bedrock Top of Bentonite Chips (Competent) - 1.5 Bentonite Steel outer casing 2" Sch 40 **PVC** Riser - 2.25 Top of Morie No. 00 Sand Top of Screen Morie No. 00 Sand Bottom of screen - see Note 1 Bottom of Sump Bottom of Borehole

Not to scale

6 inches min.

Notes:

(1) 3 inch end cap installed at bottom of well screen.

Project: SEAD-48 **Drilling Contractor:** Lyon Drilling, Inc. **Date Started:** Well Number: MW48-6 8/18/2003 Geologist: E. Ashton **Date Completed:** 8/18/2003 Surface completion: Road Box Depth Below Elevation Ground Surface (ft) (not surveyed) Top of Protective Casing Protective Top of PVC Riser Casing **Ground Surface** Road Box/Ground Surface Concrete \_\_Top of Grout <u>-</u> 0.0 Grout Weathered Bedrock Top of Bentonite Chips (Competent) - 1.5 Bentonite Steel outer casing 2" Sch 40 **PVC** Riser Top of Morie No. 00 Sand - 2.25 Top of Screen Morie No. 00 Sand Bottom of screen - see Note 1 Bottom of Sump Bottom of Borehole

(1) 3 inch end cap installed at bottom of well screen.

Not to scale

6 inches min.

Project: SEAD-48 **Drilling Contractor:** Lyon Drilling, Inc. Well Number: MW48-7 **Date Started:** 8/19/2003 Geologist: E. Ashton **Date Completed:** 8/19/2003 Surface completion: Road Box Elevation Depth Below Ground Surface (ft) (not surveyed) Protective Top of Protective Casing Casing Top of PVC Riser **Ground Surface** Road Box/Ground Surface Concrete - 0.0 Top of Grout Grout Weathered Bedrock Top of Bentonite Chips (Competent) - 1.5 Bentonite Steel outer casing 2" Sch 40 **PVC** Riser - 2.25 Top of Morie No. 00 Sand Top of Screen Morie No. 00 Sand Bottom of screen Bottom of Sump Bottom of Borehole

Not to scale

6 inches min.

Notes:

(1) 3 inch end cap installed at bottom of well screen.

Project: SEAD-48 **Drilling Contractor:** Lyon Drilling, Inc. Well Number: MW48-8 **Date Started:** 8/18/2003 Geologist: E. Ashton **Date Completed:** 8/18/2003 Surface completion: Road Box Elevation Depth Below (not surveyed) Ground Surface (ft) Top of Protective Casing Protective Top of PVC Riser Casing **Ground Surface** Road Box/Ground Surface Concrete Top of Grout - 0.0 Grout Weathered Bedrock Top of Bentonite Chips (Competent) - 1.5 Bentonite Steel outer casing 2" Sch 40 **PVC** Riser - 2.25 Top of Morie No. 00 Sand Top of Screen Morie No. 00 Sand Bottom of screen - see Note 1 Bottom of Sump Bottom of Borehole

(1) 3 inch end cap installed at bottom of well screen.

Not to scale

6 inches min.

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 03/18/94

ENGINEERING-SCIENCE, INC.

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

REFERENCE COORDINATE SYSTEM: New York State Plane

WELL LOCATION (N/E): 998909.7 749948.8

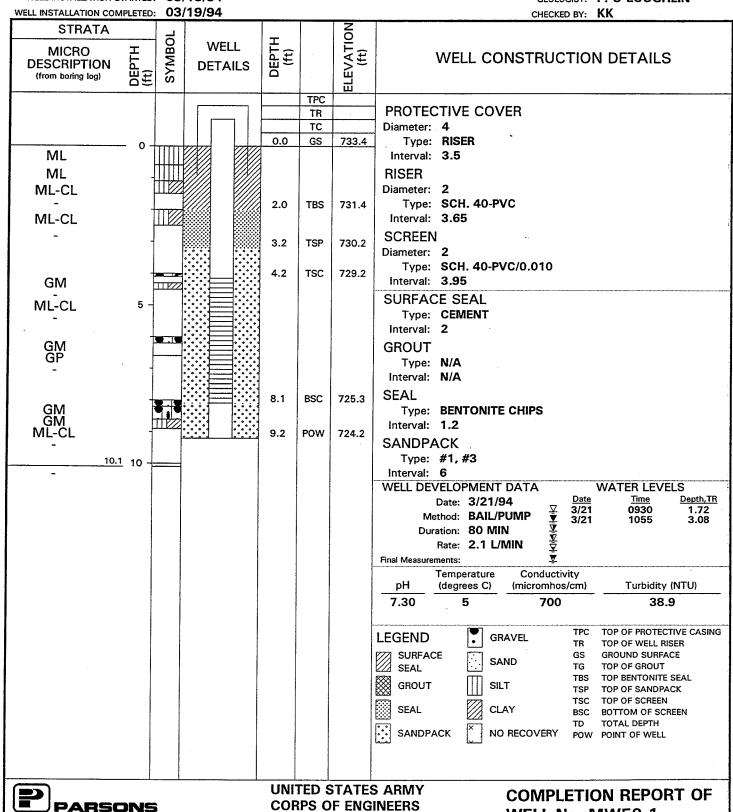
GROUND SURFACE ELEVATION (ft): 733.4

**DATUM: NAD 1983** 

GEOLOGIST: F. O'LOUGHLIN

WELL No. MW59-1

Sheet 1 of 1



Seneca Army Depot

Romulus, New York

Sheet 1 of 1

#### COMPLETION REPORT OF WELL No. MW59-2

ENGINEERING-SCIENCE, INC.

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCS PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 03/06/94

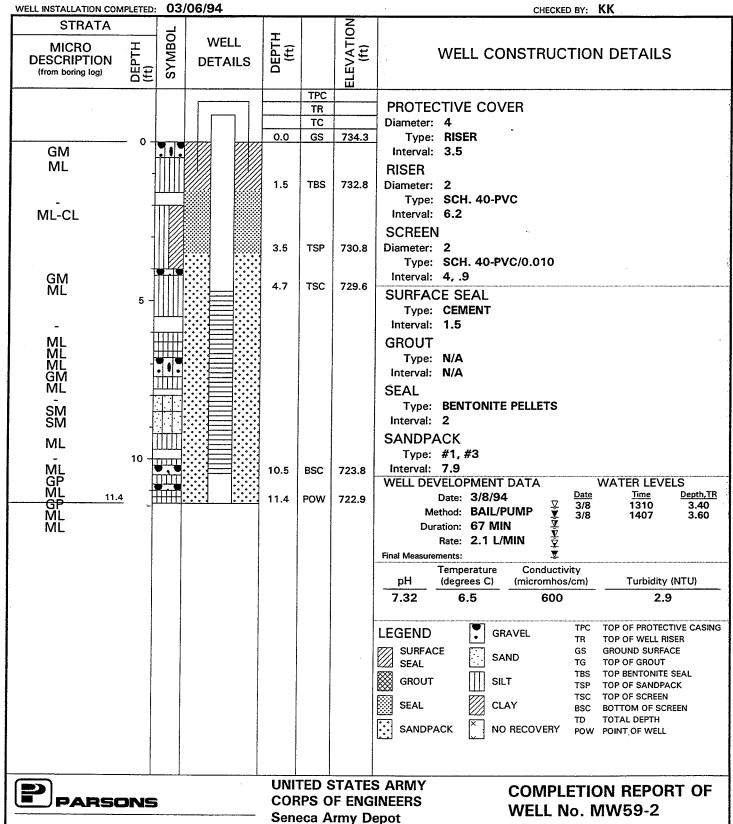
DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

WELL LOCATION (N/E): 999036.1 749874.0

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 734.3

**DATUM: NAD 1983** GEOLOGIST: F. O'LOUGHLIN



Romulus, New York

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 03/18/94 WELL INSTALLATION COMPLETED: 03/18/94

WELL LOCATION (N/E): 999030.0 750345.9

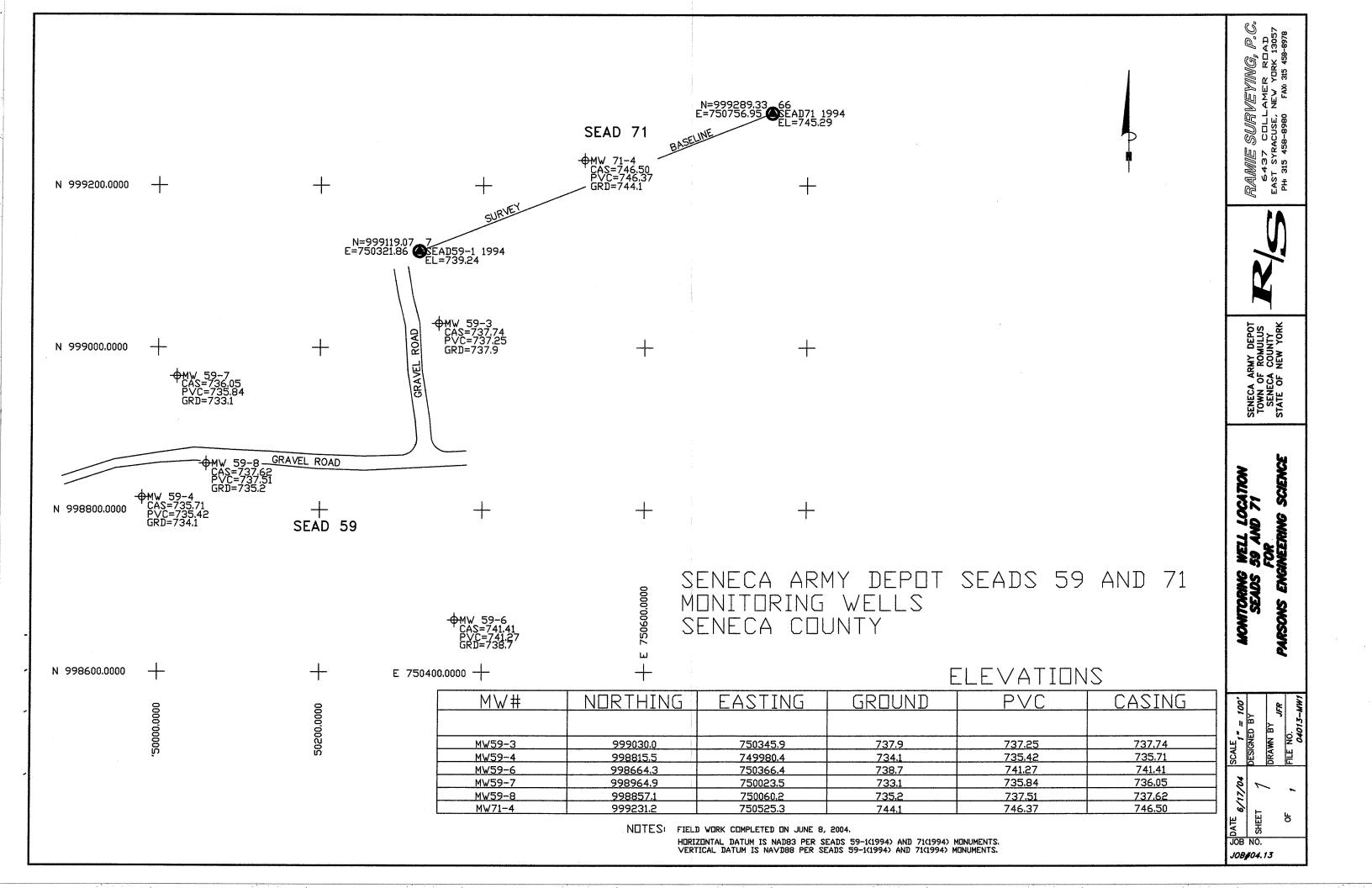
REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 737.7 **DATUM: NAD 1983** 

GEOLOGIST: F. O'LOUGHLIN

| WELL INSTALLATION COMPLETED:                                   | 03/18/94     | <del></del>   | T                                 | T                                                  | CHECKED BY: KK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------|--------------|---------------|-----------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STRATA  MICRO DESCRIPTION (from boring log)  (from boring log) | WELL DETAILS | DEPTH<br>(ft) |                                   | ELEVATION<br>(ft)                                  | WELL CONSTRUCTION DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| GM<br>ML<br>ML<br>PT CGPCM CC C                                |              | 7.7<br>8.8    | TPC TR TC GS TBS TSP TSC  BSC POW | 737.7<br>736.9<br>735.3<br>734.0<br>730.0<br>728.9 | PROTECTIVE COVER  Diameter: 4  Type: ROADWAY BOX Interval: 3.5  RISER  Diameter: 2  Type: SCH. 40-PVC Interval: 2.85  SCREEN  Diameter: 2  Type: SCH. 40-PVC/0.010 Interval: 3.95  SURFACE SEAL  Type: CEMENT Interval: .8  GROUT  Type: N/A Interval: N/A  SEAL  Type: BENTONITE Interval: 1.6  SANDPACK  Type: #1, #3 Interval:  WELL DEVELOPMENT DATA  Date: 3/20/94  Method: BAIL/PUMP  Additional BAIL/PUMP  Duration: 55 MIN Rate: 2 L/MIN  Final Measurements:  Temperature  Conductivity (micromhos/cm)  Turbidity (NTU)  7.23  TOP OF PROTECTIVE CASING TOP OF GROUT TOP OF SANDPACK  TOP OF SANDPACK  SEAL  GROUT  SILT  TSP TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP OF SCREEN TOP |
| PARSONS<br>ENGINEERING-SCI                                     | ENCE, INC.   | COR<br>Sene   | PS O                              |                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCs WELL LOCATION (N/E): 999026.3 750264.3 PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUSANY ERENCE COORDINATE SYSTEM: DRILLING CONTRACTOR: GROUND SURFACE ELEVATION (f+): NA DRILLING METHOD: DATUM: NAD 1983 \_L INSTALLATION STARTED: №03/17/94 **GEOLOGIST:** INSTALLATION COMPLETED: F.03/17/94 CHECKED BY: ELEVATION (ft) **STRATA** SYMBO **WELL MICRO** WELL CONSTRUCTION DETAILS DEPTI (ft) DESCRIPTION **DETAILS** (from boring log) TPC TR PROTECTIVE COVER TC D ameter: 0.0 GS NA Type: 0 Interval: RISER Diameter: Type: Interval: SCREEN Diameter: Type: Interval: SURFACE SEAL 5 Tupe: Interval: GROUT Type: Interval: 8.0 SFAL Type: Interval: SANDPACK Type: Interval: WATER LEVELS WELL DEVELOPMENT DATA <u>Date</u> Time Depth.TR Date: ZZZZ Method: Duration: Rate: Final Measurements: TemperatureConductivity pH (degrees COmicromhos/cm)Turbidity (NTU) TOP OF PROTECTIVE CASING **LEGEND GRAVEL** TOP OF WELL RISER TR **SURFACE** GS GROUND SURFACE SAND TG TOP OF GROUT SEAL TOP BENTONITE SEAL TBS **GROUT** SILT TOP OF SANDPACK TSP TSC TOP OF SCREEN SEAL CLAY BOTTOM OF SCREEN BSC TD TOTAL DEPTH SANDPACK NO RECOVERY POW POINT OF WELL **UNITED STATES ARMY COMPLETION REPORT OF PARSONS CORPS OF ENGINEERS** WELL No. MW59-3A Seneca Army Depot Sheet 1 of 1 ENGINEERING-SCIENCE, INC. Romulus, New York



PROJECT: SEVEN LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 06/13/94

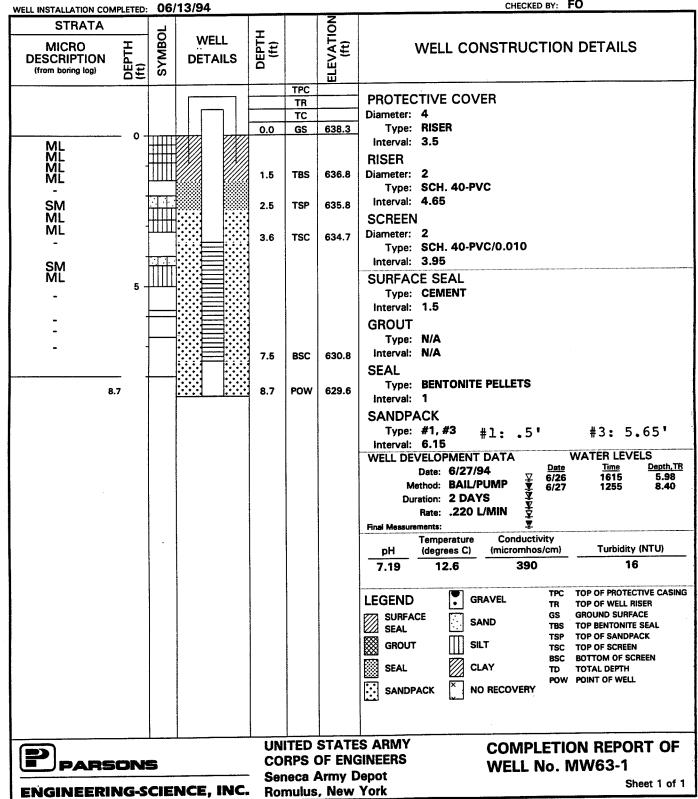
WELL LOCATION (N/E): 1013124.1 741608.4

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 638.3

**DATUM: NAD 1983** GEOLOGIST: K. KELLY

CHECKED BY: FO



WELL LOCATION (N/E): 1012979.9 741136.2 PROJECT: SEVEN LOW PRIORITY AOCS REFERENCE COORDINATE SYSTEM: New York State Plane PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY GROUND SURFACE ELEVATION (ft): 630.9 DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS **DATUM: NAD 1983** DRILLING METHOD: HOLLOW STEM AUGER GEOLOGIST: K. KELLY WELL INSTALLATION STARTED: 06/14/94 CHECKED BY: FO WELL INSTALLATION COMPLETED: 06/14/94 LEVATION (ft) **STRATA** SYMBOL DEPTH (ft) WELL DEPTH (ft) **MICRO** WELL CONSTRUCTION DETAILS DESCRIPTION **DETAILS** (from boring log) 딦 TPC PROTECTIVE COVER TR TC Diameter: 4 Type: RISER 0.0 GS 630.9 Interval: 3.5 ML **RISER** 1.5 **TBS** 629.4 Diameter: 2 ML Type: SCH. 40-PVC Interval: 4.05 ML 628.4 2.5 **TSP** TSC 627.9 **SCREEN** 3.0 Diameter: 2 ΜĽ Type: SCH. 40-PVC/0.010 Interval: 3.95 SP SURFACE SEAL  $\mathsf{ML}$ Type: CEMENT Interval: 1.5 SP **GROUT** Type: N/A 623.9 7.0 BSC Interval: N/A POW 622.8 8.1 8.2 Type: BENTONITE PELLETS Interval: 1 **SANDPACK** Type: #1, #3 #1: .3" #3: 5.4' Interval: 5.7 WATER LEVELS WELL DEVELOPMENT DATA Date <u>Time</u> Depth,TR Date: 6/26/94 6/25 6/26 1450 Method: BAIL/PUMP 8.20 1410 **Duration: 2 DAYS** Rate: .893 L/MIN Final Measurements: Temperature Conductivity Turbidity (NTU) pН (degrees C) (micromhos/cm) 7.02 15.4 600 10 TOP OF PROTECTIVE CASING **GRAVEL LEGEND** TOP OF WELL RISER SURFACE **GROUND SURFACE** SAND TOP BENTONITE SEAL TBS SEAL TOP OF SANDPACK TSP **GROUT** SILT TOP OF SCREEN TSC **BOTTOM OF SCREEN** BSC SEAL CLAY TOTAL DEPTH TD POW POINT OF WELL NO RECOVERY **SANDPACK UNITED STATES ARMY COMPLETION REPORT OF** 

**CORPS OF ENGINEERS** 

Seneca Army Depot

Romulus, New York

WELL No. MW63-2

Sheet 1 of 1

PARSONS

ENGINEERING-SCIENCE, INC.

WELL LOCATION (N/E): 1013181.9 741130.1

REFERENCE COORDINATE SYSTEM: New York State Plane

# **COMPLETION REPORT OF WELL No. MW63-3**

PROJECT: SEVEN LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

GROUND SURFACE ELEVATION (ft): 631.8 DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS **DATUM: NAD 1983** DRILLING METHOD: HOLLOW STEM AUGER GEOLOGIST: K. KELLY WELL INSTALLATION STARTED: 06/14/94 CHECKED BY: FO WELL INSTALLATION COMPLETED: 06/14/94 ELEVATION (ft) **STRATA** SYMBOL DEPTH (ft) WELL DEPTH (ft) **MICRO** WELL CONSTRUCTION DETAILS DESCRIPTION **DETAILS** (from boring log) TPC PROTECTIVE COVER TR Diameter: 4 TC Type: RISER 631.8 0.0 GS Interval: 3.5 ML GM RISER ML Diameter: 2 TBS 630.3 1.5 ML Type: SCH. 40-PVC Interval: 4.05 CL TSP 629.3 2.5 **SCREEN** 3.0 TSC 628.8 Diameter: 2 ŠΜ Type: SCH. 40-PVC/0.010 Interval: 3.95 SURFACE SEAL 5 Type: CEMENT Interval: 1.5 **GROUT** SM BSC 624.8 Type: N/A 7.0 Interval: N/A POW 623.7 8.1 8.3 Type: BENTONITE PELLETS Interval: 1 **SANDPACK** Type: #1, #3 #3: 5.4' #1: .4' Interval: 5.8 WATER LEVELS WELL DEVELOPMENT DATA Depth,TR Date Time 1330 Date: 6/27/94 6/26 4.15 Method: BAIL/PUMP 6/26 Duration: 2 DAYS 0945 3.42 Rate: .526 L/MIN Final Measurements: Conductivity Temperature Turbidity (NTU) (degrees C) (micromhos/cm) нα 20 6.89 16.1 2000 TOP OF PROTECTIVE CASING TPC **GRAVEL** LEGEND TOP OF WELL RISER TR GROUND SURFACE SURFACE GS SAND TOP BENTONITE SEAL TBS SEAL TSP TOP OF SANDPACK **GROUT** TSC TOP OF SCREEN **BOTTOM OF SCREEN** CLAY SEAL TOTAL DEPTH TD POW POINT OF WELL NO RECOVERY SANDPACK UNITED STATES ARMY **COMPLETION REPORT OF CORPS OF ENGINEERS** PARSONS WELL No. MW63-3 Seneca Army Depot Sheet 1 of 1 ENGINEERING-SCIENCE, INC. Romuius, New York

PROJECT: SEVEN LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 03/30/94

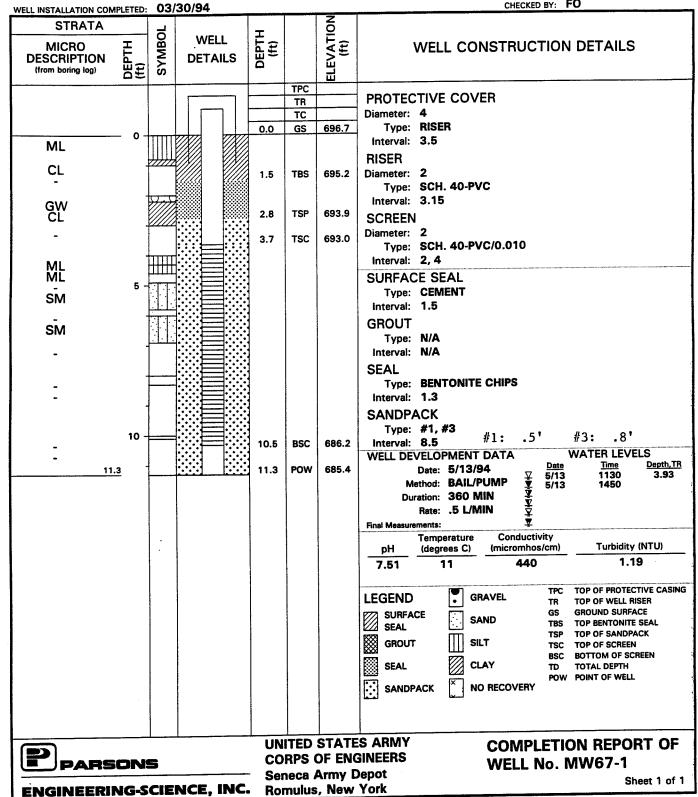
WELL LOCATION (N/E): 1002498.4 748911.7

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 696.7

**DATUM: NAD 1983** GEOLOGIST: F. O'LOUGHLIN

CHECKED BY: FO



## COMPLETION REPORT OF WELL No. MW67-2

PROJECT: SEVEN LOW PRIORITY AOCS

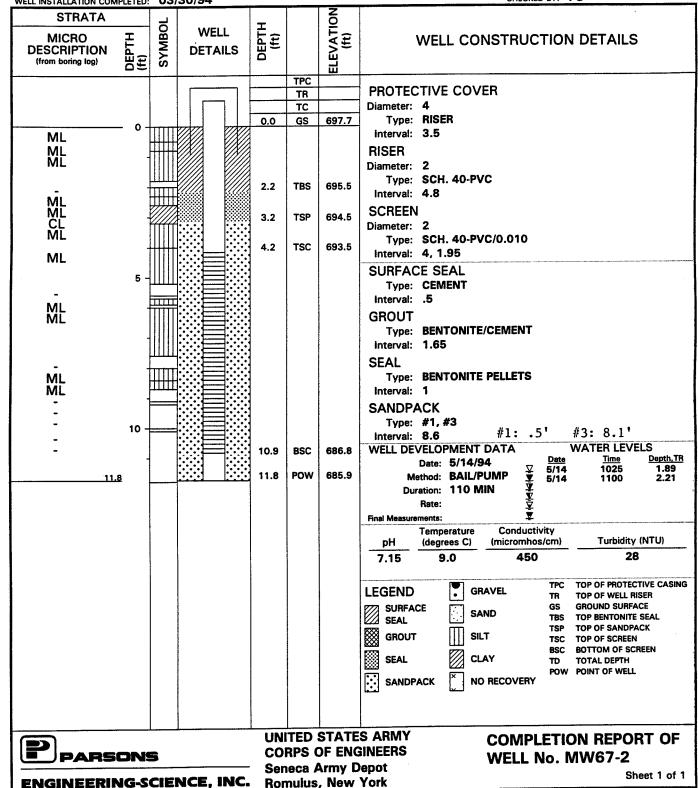
PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

REFERENCE COORDINATE SYSTEM: New York State Plane GROUND SURFACE ELEVATION (ft): 697.7

WELL LOCATION (N/E): 1002256.6 748953.1

**DATUM: NAD 1983** DRILLING METHOD: HOLLOW STEM AUGER GEOLOGIST: K.KELLY WELL INSTALLATION STARTED: 03/30/94 CHECKED BY: FO WELL INSTALLATION COMPLETED: 03/30/94



## **COMPLETION REPORT OF WELL No. MW67-3**

PROJECT: SEVEN LOW PRIORITY AOCS PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

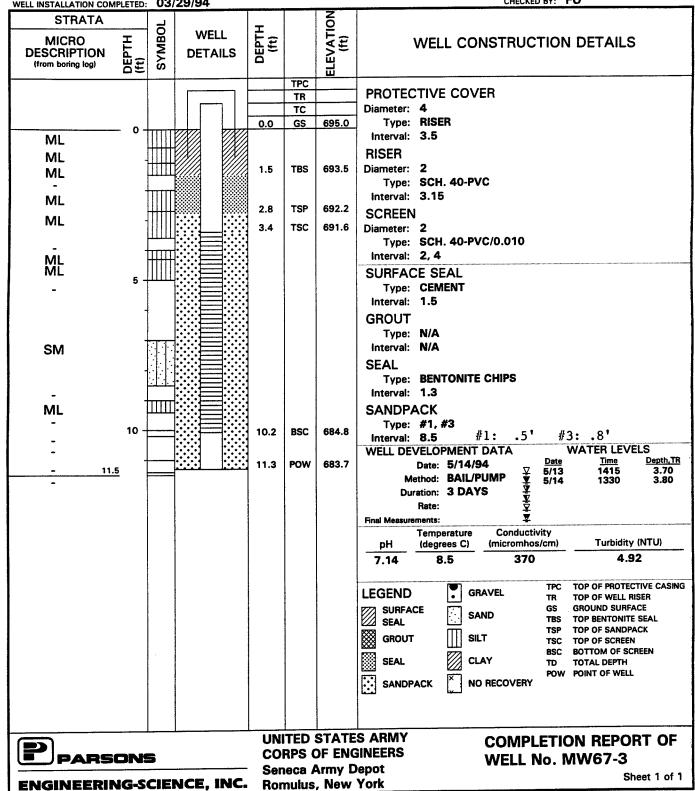
WELL INSTALLATION STARTED: 03/29/94 WELL INSTALLATION COMPLETED: 03/29/94 WELL LOCATION (N/E): 1002492.2 748794.6

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 695.0

**DATUM: NAD 1983** GEOLOGIST: F. O'LOUGHLIN

CHECKED BY: FO



#### COMPLETION REPORT OF WELL No. MW70-1

PROJECT: SEVEN LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 05/11/94

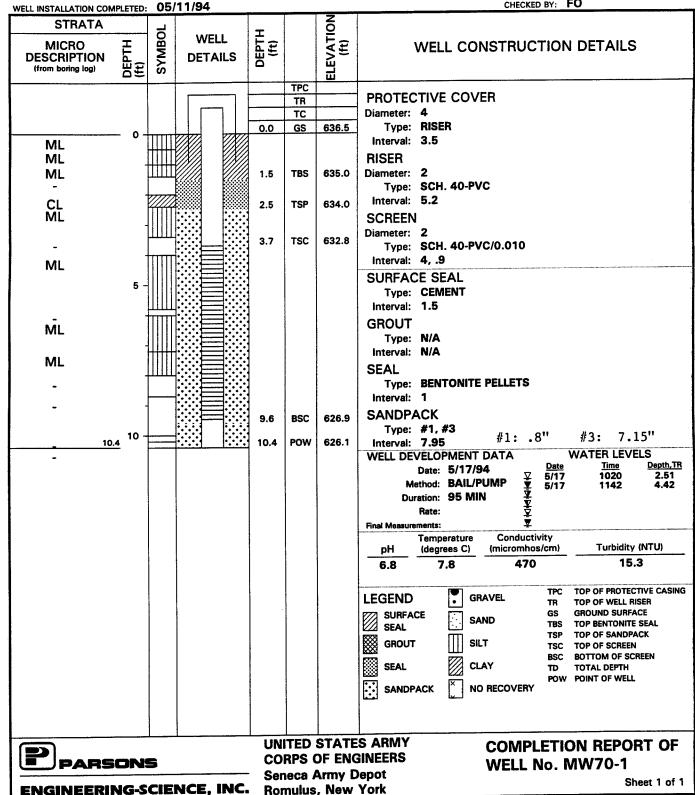
WELL LOCATION (N/E): 1007329.9 740889.1

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 636.5

**DATUM: NAD 1983** GEOLOGIST: F. O'LOUGHLIN

CHECKED BY: FO



## COMPLETION REPORT OF WELL No. MW70-2

PROJECT: SEVEN LOW PRIORITY AOCs

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

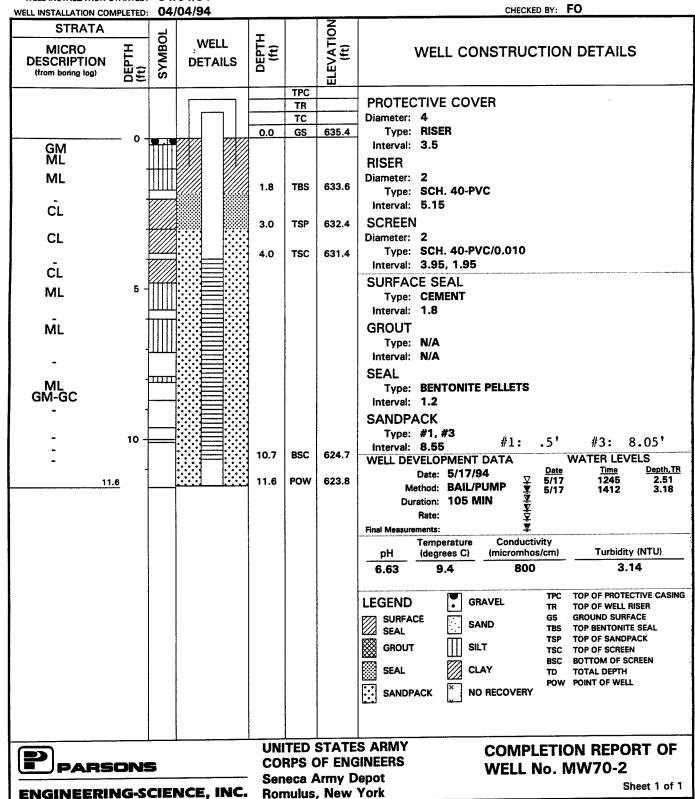
DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 04/04/94

WELL LOCATION (N/E): 1007329.8 740555.6

REFERENCE COORDINATE SYSTEM: New York State Plane GROUND SURFACE ELEVATION (ft): 635.4

**DATUM: NAD 1983** GEOLOGIST: K. KELLY



## COMPLETION REPORT OF WELL No. MW70-3

PROJECT: SEVEN LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

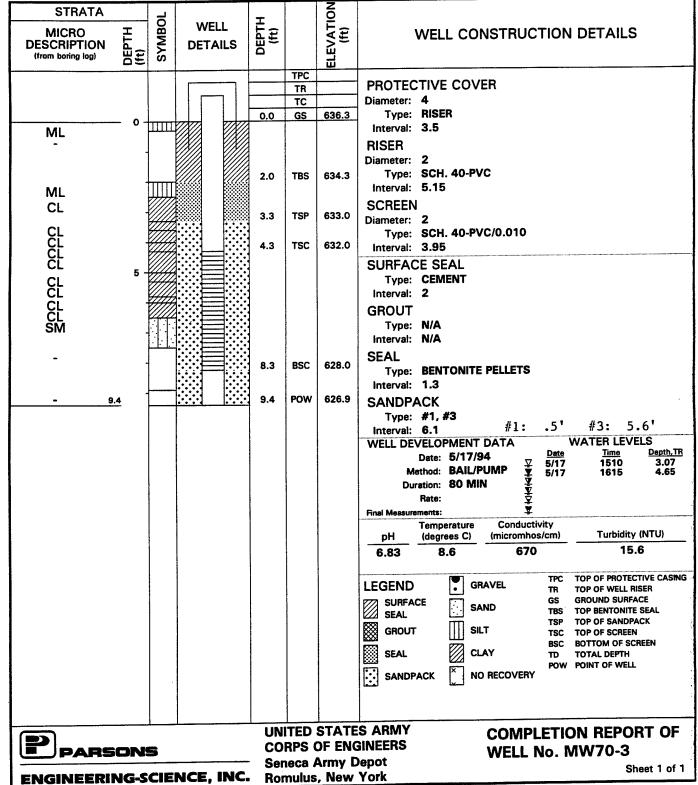
DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

WELL LOCATION (N/E): 1007173.3 740552.3

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 636.3

**DATUM: NAD 1983** DRILLING METHOD: HOLLOW STEM AUGER GEOLOGIST: K. KELLY WELL INSTALLATION STARTED: 04/05/94 CHECKED BY: FO WELL INSTALLATION COMPLETED: 04/05/94 **STRATA** 



WELL LOCATION (N/E): 1007055.2 740563.3

## COMPLETION REPORT OF WELL No. MW70-4

PROJECT: SEVEN LOW PRIORITY AOCS

ENGINEERING-SCIENCE, INC.

REFERENCE COORDINATE SYSTEM: New York State Plane PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY GROUND SURFACE ELEVATION (ft): 636.3 DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS **DATUM: NAD 1983** DRILLING METHOD: HOLLOW STEM AUGER GEOLOGIST: F. O'LOUHGLIN WELL INSTALLATION STARTED: 05/11/94 CHECKED BY: FO WELL INSTALLATION COMPLETED: 05/11/94 LEVATION (ft) **STRATA** DEPTH (ft) SYMBOL WELL **MICRO** WELL CONSTRUCTION DETAILS DEPT! DESCRIPTION **DETAILS** (from boring log) 핍 TPC PROTECTIVE COVER TR TC Diameter: 4 Type: RISER 0.0 GS 636.3 Interval: 3.5 ML **RISER** CL 1.5 TBS 634.8 Diameter: 2 Type: SCH. 40-PVC Interval: 4.25 **TSP** 633.8 ML 2.5 **SCREEN** Diameter: 2 3.6 TSC 632.7 Type: SCH. 40-PVC/0.010 Interval: 4.9 SC SURFACE SEAL Type: CEMENT Interval: 1.5 ML SM **GROUT** Type: N/A Interval: N/A SM SM SEAL Type: BENTONITE PELLETS SM Interval: 1 BSC 627.0 9.3 SANDPACK Type: #1, #3 10.1 POW 626.2 **#1: .55**' #3: 7.05' 10.1 10 Interval: 7.6 WATER LEVELS WELL DEVELOPMENT DATA Depth,TR Date Time Date: 5/23/94 2.22 2.42 0825 Method: BAIL/PUMP 5/23 2.42 **Duration: 6 DAYS** Rate: .230 L/MIN Final Measurements: Temperature Conductivity Turbidity (NTU) pН (degrees C) (micromhos/cm) 3.59 690 6.93 10.1 TOP OF PROTECTIVE CASING **GRAVEL LEGEND** TOP OF WELL RISER SURFACE GROUND SURFACE SAND TOP BENTONITE SEAL TBS SEAL TOP OF SANDPACK TSP SILT **GROUT** TOP OF SCREEN TSC **BOTTOM OF SCREEN** BSC SEAL CLAY TOTAL DEPTH TD POW POINT OF WELL NO RECOVERY SANDPACK **UNITED STATES ARMY COMPLETION REPORT OF CORPS OF ENGINEERS PARSONS** WELL No. MW70-4 Seneca Army Depot Sheet 1 of 1

Romulus, New York

## COMPLETION REPORT OF WELL No. MW71-1

PROJECT: SEVEN LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 03/14/94

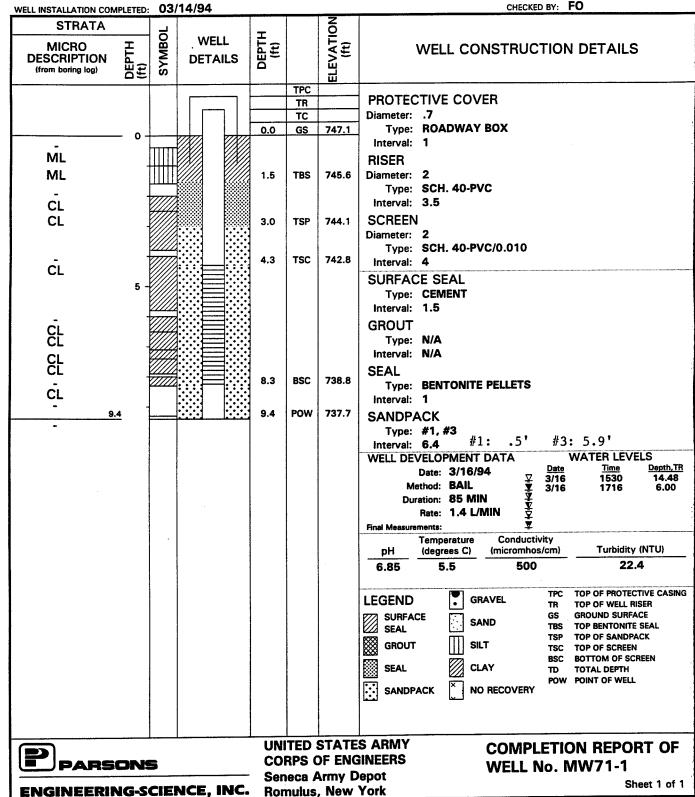
WELL LOCATION (N/E): 999297.5 750894.8

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 747.1

**DATUM: NAD 1983** GEOLOGIST: F. O'LOUHGLIN

CHECKED BY: FO



## COMPLETION REPORT OF WELL No. MW71-2

PROJECT: SEVEN LOW PRIORITY AOCs

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

WELL INSTALLATION STARTED: 03/22/94

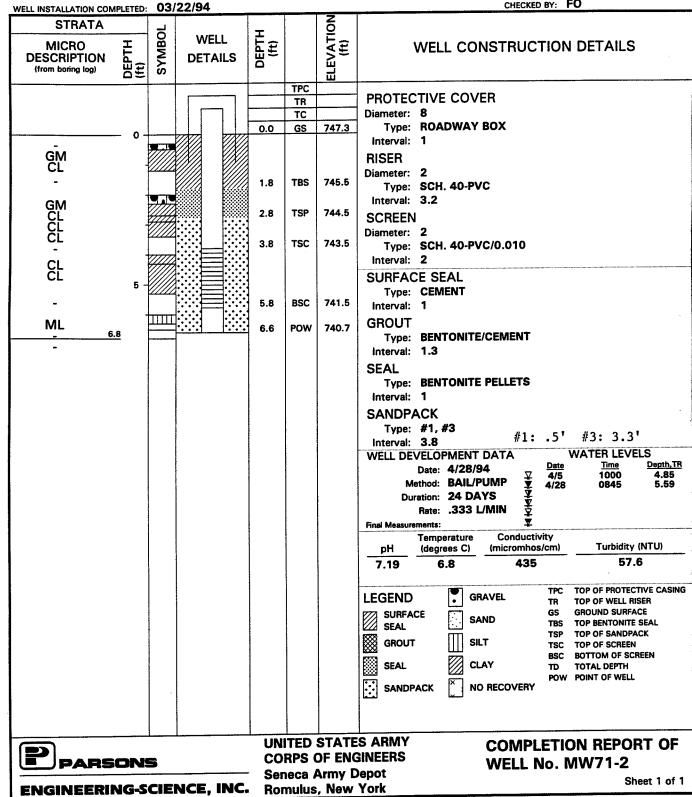
WELL LOCATION (N/E): 999309.2 750986.4

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 747.3

**DATUM: NAD 1983** GEOLOGIST: K. KELLY

CHECKED BY: FO



## COMPLETION REPORT OF WELL No. MW71-3

PROJECT: SEVEN LOW PRIORITY AOCS

PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY

DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS

DRILLING METHOD: HOLLOW STEM AUGER

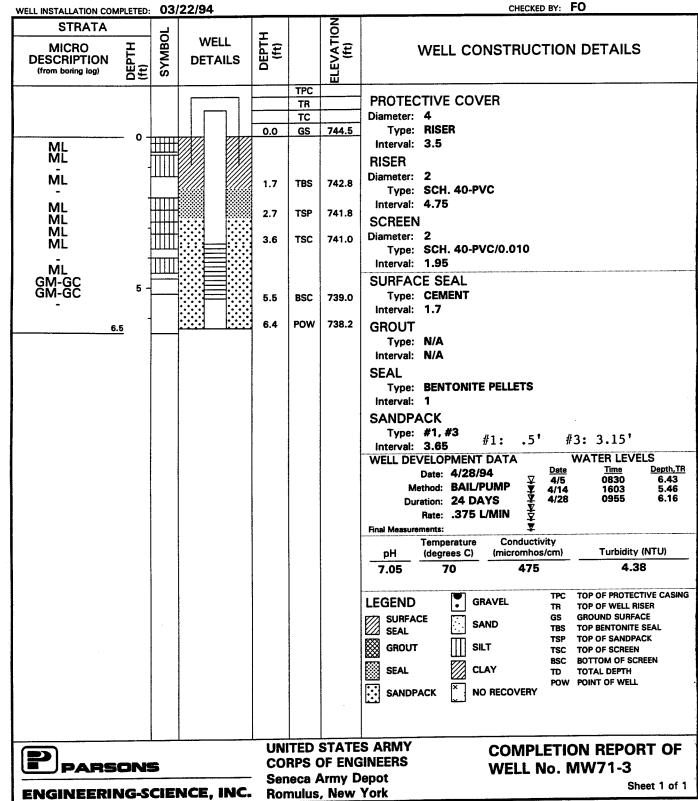
WELL INSTALLATION STARTED: 03/22/94

WELL LOCATION (N/E): 999229.9 750868.8

REFERENCE COORDINATE SYSTEM: New York State Plane

GROUND SURFACE ELEVATION (ft): 744.5

**DATUM: NAD 1983** GEOLOGIST: K. KELLY



| Contracto     | or:                    | SJB      |          |          | PARSONS<br>DRILLING RECORD                                                                    | BORING/<br>WELL NO. M | Sheet 1 of 2<br>W-119-1         |
|---------------|------------------------|----------|----------|----------|-----------------------------------------------------------------------------------------------|-----------------------|---------------------------------|
| Driller:      |                        | Walt Ket | ter      |          |                                                                                               | Location Descript     |                                 |
| Inspector     | :                      | Ed Ashto | n        |          | PROJECT NAME: Seneca Army Depot-SEAD 119                                                      | Former Small          | Arms Range                      |
| Rig Type:     | : _                    | ATV-CN   | 1E-850   |          | PROJECT NUMBER 739855.01002                                                                   | Near Lake Sho         | re Housing                      |
| G             | ROUNDW                 | ATER OB  | SERVATIO | NS       |                                                                                               | Location Plan         |                                 |
| Water         | ROUNDW                 | TITER OB | LICENTIA | 110      | Weather: Sunny - 70'F                                                                         | <u>Location Fia</u>   | Ņ                               |
| Level (bgs    |                        |          |          |          |                                                                                               |                       | I                               |
| Date          | 8/8/02                 |          |          |          | Date/Time Start: August 6, 2002 -1510                                                         | See Site Pla          | ın                              |
| Time<br>Meas. | 0953                   |          |          |          | Date/Time Finish: August 6, 2002 -1755                                                        |                       |                                 |
| From          | TOC                    |          |          |          | Date/Time Finish. August 0, 2002 -1/33                                                        | 1                     |                                 |
| Sample        | Sample                 | SPT      | % Rec.   |          | FIELD IDENTIFICATION OF MATERIAL                                                              | SCHEMATIC             | COMMENTS                        |
| Depth<br>+3   | I.D.                   | 52.2     | 70 1100  | PID (ppm |                                                                                               |                       |                                 |
| 3             |                        |          |          |          |                                                                                               |                       |                                 |
| +2            |                        |          |          |          |                                                                                               |                       |                                 |
|               |                        |          |          |          |                                                                                               |                       | Steel Protective Casing         |
| +1            |                        |          |          |          |                                                                                               |                       |                                 |
| 0             |                        |          |          |          |                                                                                               |                       | 2-inch ID PVC Riser<br>Sch 40   |
|               |                        | 4        | 50       | NA       | (0'-2):Brown, silt with fine sand, trace fine sand, roots, dry. (SM)                          |                       | 5511.110                        |
| 1             |                        | 6        |          |          |                                                                                               | 30000                 | Grout (0'-1.5')                 |
|               |                        | 7        |          |          |                                                                                               |                       |                                 |
| 2             |                        | 9 23     | 100      | NA       | (2'-4'):Brown, silt with fine sand, fine-medium gravel, dry. (SM)                             |                       | Bentonite Chips                 |
| 3             |                        | 15       | 100      | INA      | (2-4). Brown, sht with thie sand, fine-medium graver, dry. (SW)                               |                       | (1.5'-2.5')<br>Morie # 000 Sand |
|               |                        | 19       |          |          |                                                                                               |                       | (2.5'-2.75')                    |
| 4             |                        | 23       |          |          |                                                                                               |                       |                                 |
| 5             |                        | 19<br>28 | 50       | NA       | (4'-6'):Brown, silt with fine sand, trace fine gravel, black shale fragments, di (ML/SM)-Till |                       | Morie # 00 Sand                 |
| 3             |                        | 34       |          |          | (ML/SM)-TIII                                                                                  |                       | (2.75'-20')                     |
| 6             |                        | 36       |          |          |                                                                                               |                       | 2-inch ID, SCH 40, PVC          |
|               |                        | 31       | 10       | NA       | (6'-8'):Same As Above. (ML/SM)- Til                                                           |                       | 0.010-in Slot Well              |
| 7             |                        | 35<br>41 |          |          |                                                                                               |                       | Screen (3' - 18')               |
| 8             |                        | 47       |          |          |                                                                                               |                       |                                 |
|               |                        | 21       | 10       | NA       | (8'-8.9'): Same As Above. (ML/SM)- Til                                                        |                       |                                 |
| 9             |                        | 50/.4    |          |          | Refusal at 8.9 feet. Drilled to 10 feet with HSA:                                             |                       |                                 |
| 10            |                        |          |          |          |                                                                                               |                       |                                 |
| 10            |                        | 50/.4    | 10       | NA       | (10'-10.4'): Same As Above. (ML/SM)- Til                                                      | <del>     </del>      |                                 |
| 11            |                        |          |          |          | Refusal at 10.4 feet. Drilled to 12 feet with HSAs                                            |                       |                                 |
| 1.5           |                        |          |          |          |                                                                                               |                       |                                 |
| 12            |                        | 50/.1    | 0        | NA       | (12'-12.1'): No recover                                                                       |                       |                                 |
| 13            |                        | 30/.1    | U        | INA      | Refusal at 12.1 feet. Drilled to 14 feet with HSA:                                            | <del>    </del>       |                                 |
|               |                        | 1        |          | <u> </u> |                                                                                               |                       |                                 |
| 14            |                        |          |          |          |                                                                                               |                       |                                 |
| 15            |                        | 50/.1    | 0        | NA       | (14'-14.1'): No recover                                                                       |                       |                                 |
| 15            |                        | +        |          | +        | Refusal at 14.1 feet. Drilled to 16 feet with HSAs                                            |                       |                                 |
| 16            |                        | 1        |          | <u> </u> |                                                                                               |                       |                                 |
|               |                        | 50/.0    | 0        | NA       | No recovery                                                                                   |                       |                                 |
| 17            |                        | 1        |          |          | Refusal at 16 feet. Drilled to 20 feet with HSAs                                              |                       | Water table (17')               |
| 18            |                        | +        |          | 1        |                                                                                               |                       |                                 |
|               |                        |          | •        | •        | COMMENTS:                                                                                     | :-                    | •                               |
|               |                        | G METHOD |          |          | No environmental samples collected.                                                           |                       |                                 |
|               | SS = SPLIT             |          |          |          | Drilled to 20 feet bgs from 16 feet bgs due to last three split spoons had no recovery.       |                       |                                 |
|               | A = AUGER<br>C = CORED | CUTTINGS |          |          |                                                                                               |                       |                                 |
|               | , 50121                |          |          |          |                                                                                               |                       |                                 |

| Contract           |                                                  | CID                                              |                                                  |          |      | PARSONS DRILLING DECORD                  | BORING/<br>WELL NO. M | BORING/ Sheet 2 of 2<br>WELL NO. MW-119-1 |  |  |  |  |
|--------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|----------|------|------------------------------------------|-----------------------|-------------------------------------------|--|--|--|--|
| Contracto          | or:                                              | SJB<br>Walt Katt                                 | 100                                              |          |      | DRILLING RECORD                          | Location Descripti    | L NO. MW-119-1                            |  |  |  |  |
| Driller:           |                                                  | Walt Kett                                        | er                                               |          |      | PROJECTENAME C A D (CEAD 110             |                       |                                           |  |  |  |  |
| Inspector:         |                                                  | Ed Ashto                                         | II 050                                           |          |      | PROJECT NAME: Seneca Army Depot-SEAD 119 | Former Small          |                                           |  |  |  |  |
| Rig Type:          |                                                  | ATV-CM                                           | IE-850                                           |          |      | PROJECT NUMBER 739855.01002              | Near Lake Sho         | re Housing                                |  |  |  |  |
|                    | OUNDW                                            | ATER OB                                          | SERVATIO                                         | ONS      | 1    |                                          | Location Plan         | <b>†</b>                                  |  |  |  |  |
| Water              | [                                                |                                                  |                                                  |          |      | Weather: Sunny - 70'F                    |                       | N                                         |  |  |  |  |
| Level (bgs<br>Date | <del>                                     </del> |                                                  | <del>                                     </del> |          |      | Date/Time Start: August 6, 2002 -1510    | See Site Pla          |                                           |  |  |  |  |
| Time               |                                                  |                                                  | + + -                                            |          |      | Date/Time Start: August 0, 2002 -1510    | See Site Fia          | 111                                       |  |  |  |  |
| Meas.              |                                                  |                                                  |                                                  |          |      | Date/Time Finish: August 6, 2002 -1755   |                       |                                           |  |  |  |  |
| From               |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
| Sample             | Sample                                           | SPT                                              | % Rec.                                           |          |      | FIELD IDENTIFICATION OF MATERIAL         | SCHEMATIC             | COMMENTS                                  |  |  |  |  |
| Depth              | I.D.                                             |                                                  |                                                  | PID      | (ppm |                                          |                       | PVC sump (18'-19')                        |  |  |  |  |
| 19                 |                                                  |                                                  |                                                  |          |      |                                          |                       | PVC end cap                               |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
| 20                 |                                                  |                                                  |                                                  |          |      |                                          |                       | 20'                                       |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      | Boring terminated at 20 feet bgs.        |                       |                                           |  |  |  |  |
| <u> </u>           |                                                  |                                                  | -                                                | 1        |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  | <del>                                     </del> | 1                                                | 1        |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  | <del>                                     </del> | 1                                                | 1        |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  | <u> </u>                                         | <u> </u>                                         | 1        |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  | 1                                                | -        |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  | 1        |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  | -                                                | 1                                                | <b> </b> |      |                                          |                       |                                           |  |  |  |  |
| -                  |                                                  | 1                                                | +                                                | 1        |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  | <del>                                     </del> | +                                                | $\vdash$ |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  | t                                                | 1                                                |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  | †                                                |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  | 1                                                | 1        |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  | 1        |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  | -                                                | 1                                                | <b> </b> |      |                                          |                       |                                           |  |  |  |  |
| -                  |                                                  | 1                                                | +                                                | 1        |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  | <del>                                     </del> | +                                                | $\vdash$ |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      | COMMENTS.                                |                       |                                           |  |  |  |  |
| SAMPLING METHOD    |                                                  |                                                  |                                                  |          |      | COMMENTS:                                |                       |                                           |  |  |  |  |
|                    | SAMPLING<br>SS = SPLIT                           |                                                  |                                                  |          |      | See page 1 comments.                     |                       |                                           |  |  |  |  |
|                    |                                                  | SPOON<br>CUTTINGS                                |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    | C = CORED                                        |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |
|                    |                                                  |                                                  |                                                  |          |      |                                          |                       |                                           |  |  |  |  |

| Contracto   | r:      |            | SJB       |                                                  |      |           | PARSONS<br>DRILLING RECORD                                                        |         | RING/<br>LL NO. M                      | Sheet 1 of 2<br>W-119-2 |  |  |  |  |  |  |  |
|-------------|---------|------------|-----------|--------------------------------------------------|------|-----------|-----------------------------------------------------------------------------------|---------|----------------------------------------|-------------------------|--|--|--|--|--|--|--|
| Driller:    |         |            | Walt Kett | er                                               |      |           |                                                                                   |         | tion Descript                          |                         |  |  |  |  |  |  |  |
| Inspector:  |         |            | Ed Ashto  | n                                                |      |           | PROJECT NAME: Seneca Army Depot-SEAD 119                                          |         | Former Small                           | Arms Range              |  |  |  |  |  |  |  |
| Rig Type:   |         |            | ATV-CM    | E-850                                            |      |           | PROJECT NUMBER 739855.01002                                                       |         | Near Lake Sho                          | ore Housing             |  |  |  |  |  |  |  |
|             |         |            |           |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
|             | ROUN    | DWA        | TER OBS   | ERVA                                             | TIO  | NS        |                                                                                   | Loca    | <u>tion Pla</u> n                      | <b>+</b>                |  |  |  |  |  |  |  |
| Water       |         |            |           |                                                  |      |           | Weather: Sunny - 70'F                                                             | 1       |                                        | N                       |  |  |  |  |  |  |  |
| Level (bgs  |         |            |           |                                                  |      |           |                                                                                   |         |                                        | ļ                       |  |  |  |  |  |  |  |
| Date        | 8/8/02  |            |           |                                                  |      |           | Date/Time Start: August 6, 2002 - 0940 See Site Plan                              |         |                                        |                         |  |  |  |  |  |  |  |
| Time        | 0830    |            |           |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
| Meas.       | TOC     |            |           |                                                  |      |           | Date/Time Finish: August 6, 2002 - 1417                                           | 4       |                                        |                         |  |  |  |  |  |  |  |
| From        | TOC     | _          |           | ļ I                                              |      |           | EIELD IDENTIFICATION OF MATERIAL                                                  | 0.0     | TIES A A TIES                          | COMMENTE                |  |  |  |  |  |  |  |
| Sample      | Sam     |            | SPT       | % R                                              | Rec. | DID (     | FIELD IDENTIFICATION OF MATERIAL                                                  | SC      | CHEMATIC                               | COMMENTS                |  |  |  |  |  |  |  |
| Depth<br>+3 | I.I     | <i>)</i> . |           |                                                  |      | PID (ppm) |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
| 13          |         |            |           |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
| +2          |         |            |           |                                                  |      |           |                                                                                   | Г       | Ī                                      |                         |  |  |  |  |  |  |  |
| . 2         |         |            |           | 1                                                |      |           |                                                                                   |         |                                        | Steel Protective Casing |  |  |  |  |  |  |  |
| +1          |         |            |           | <b>†</b>                                         |      |           |                                                                                   |         |                                        | Sicci i recouve Gasily  |  |  |  |  |  |  |  |
| <u> </u>    |         |            |           | <del>                                     </del> |      |           |                                                                                   |         |                                        | 2-inch ID PVC Riser     |  |  |  |  |  |  |  |
| 0           |         |            |           | <del>                                     </del> |      |           |                                                                                   |         |                                        | Sch 40                  |  |  |  |  |  |  |  |
|             |         |            | 5         | 50                                               | )    | NA        | (0'-2'):Brown, silt with fine sand, roots, trace fine gravel, dry. (SM)           |         | ###                                    | 1                       |  |  |  |  |  |  |  |
| 1           |         |            | 7         |                                                  |      |           | , , , , , , , , , , , , , , , , , , , ,                                           |         | 用用                                     | Grout (0'-1.5')         |  |  |  |  |  |  |  |
|             |         |            | 11        |                                                  |      |           |                                                                                   |         | 00000000000000000000000000000000000000 |                         |  |  |  |  |  |  |  |
| 2           |         |            | 11        |                                                  |      |           |                                                                                   |         |                                        | Bentonite Chips         |  |  |  |  |  |  |  |
|             |         |            | 15        | 10                                               | 0    | NA        | (2'-4'):Brown, silt with trace-fine sand, fragments of black shale, dry. (ML/SN   | f)-Till |                                        | (1.5'-2.5')             |  |  |  |  |  |  |  |
| 3           |         |            | 17        |                                                  |      |           |                                                                                   |         | A A                                    | Morie #000 Sand         |  |  |  |  |  |  |  |
|             |         |            | 19        |                                                  |      |           |                                                                                   |         |                                        | (2.5'-2.75')            |  |  |  |  |  |  |  |
| 4           |         |            | 25        |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
|             |         |            | 18        | 10                                               | 0    | NA        | (4'-6'):Brown, silt with trace fine sand, fine-medium gravel, fragments of blac   | k sha   |                                        |                         |  |  |  |  |  |  |  |
| 5           |         |            | 21        |                                                  |      |           | dry. (ML/SM)-Till                                                                 |         |                                        | Morie #00 Sand          |  |  |  |  |  |  |  |
|             |         |            | 18        |                                                  |      |           |                                                                                   |         |                                        | (2.75'-20')             |  |  |  |  |  |  |  |
| 6           |         |            | 22        | <u> </u>                                         |      |           |                                                                                   |         |                                        | 2-inch ID, SCH 40, PVC  |  |  |  |  |  |  |  |
|             |         |            | 50/.4     | 5                                                |      | NA        | (6'-6.4'):Brown, silt with trace clay, black shale, dry. (ML/SM)- T               |         |                                        | 0.010-in Slot Well      |  |  |  |  |  |  |  |
| 7           |         |            |           |                                                  |      |           | Refusal at 6.4 feet. Drilled to 8 feet with HSA:                                  |         |                                        | Screen (3' - 18')       |  |  |  |  |  |  |  |
| 0           |         |            |           |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
| 8           |         |            | 10        | 80                                               |      | NA        | (01.101) Decrees with social trace about his death decree with (MI (CM) T         |         |                                        |                         |  |  |  |  |  |  |  |
| 9           |         |            | 27        | 00                                               | ,    | NA        | (8'-10'):Brown, silt with trace clay, black shale, dry to moist. (ML/SM)-T        |         |                                        |                         |  |  |  |  |  |  |  |
| -           |         |            | 34        |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
| 10          |         |            | 47        |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
| 10          |         |            | 13        | 10                                               | 0    | NA        | (10'-12'): Same As Above. (ML/SM)-Til                                             |         |                                        |                         |  |  |  |  |  |  |  |
| 11          |         |            | 24        | 10                                               | 9    | 14/1      | (10 12). Suite 110 110010. (HE/OH)-111                                            |         |                                        |                         |  |  |  |  |  |  |  |
|             |         |            | 44        | <b>†</b>                                         |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
| 12          |         |            | 45        | <del>                                     </del> |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
|             |         |            | 50/.3     | 5                                                |      | NA        | (12'-12.3'): Same As Above. (ML/SM)-Til                                           |         |                                        |                         |  |  |  |  |  |  |  |
| 13          |         |            |           |                                                  |      |           | Refusal at 12.3 feet. Drilled to 14 feet with HSAs                                |         |                                        |                         |  |  |  |  |  |  |  |
|             |         |            |           |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
| 14          |         |            |           |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
|             |         |            | 38        | 50                                               | )    | NA        | (14'-15.7'):Brown to grey, silt with trace clay, black shale, dry to moist. (ML/S | SM)-1   |                                        | Water table (14.50')    |  |  |  |  |  |  |  |
| 15          |         |            | 35        |                                                  |      |           | Refusal at 15.7 feet. Drilled to 20 feet with HSA:                                |         |                                        |                         |  |  |  |  |  |  |  |
|             |         |            | 27        |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
| 16          |         |            | 50/.2     |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
|             |         |            |           |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
| 17          |         |            |           |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
| 16          |         |            |           |                                                  |      |           |                                                                                   |         | Ш                                      |                         |  |  |  |  |  |  |  |
| 18          |         |            |           |                                                  |      |           |                                                                                   |         |                                        | <u> </u>                |  |  |  |  |  |  |  |
|             |         |            |           |                                                  |      |           | COMMENTS:                                                                         |         |                                        |                         |  |  |  |  |  |  |  |
|             |         |            | METHOD    |                                                  |      |           | No environmental samples collected.                                               |         |                                        |                         |  |  |  |  |  |  |  |
|             | SS = SP |            |           |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
|             |         |            | UTTINGS   |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |
|             | C = COI | KED        |           |                                                  |      |           |                                                                                   |         |                                        |                         |  |  |  |  |  |  |  |

| Contracto           | .p                     | SJB                                              |          |                                                  |                                                  | PARSONS<br>DRILLING RECORD                    | BORING/<br>WELL NO. M | BORING/ Sheet 2 of 2<br>WELL NO. MW-119-2 |  |  |  |  |
|---------------------|------------------------|--------------------------------------------------|----------|--------------------------------------------------|--------------------------------------------------|-----------------------------------------------|-----------------------|-------------------------------------------|--|--|--|--|
| Contracto Driller:  | · ·                    | Walt Kett                                        | or       |                                                  |                                                  | DRILLING KECUKD                               | Location Descripti    | 11-117-4                                  |  |  |  |  |
|                     |                        | wait Kett                                        | er       |                                                  |                                                  | DDOIECT NAME: Company Armer Device CE AD 110  | Former Small A        |                                           |  |  |  |  |
| Inspector:          |                        | Ed Ashto                                         | II 050   |                                                  |                                                  | PROJECT NAME: Seneca Army Depot-SEAD 119      |                       |                                           |  |  |  |  |
| Rig Type:           |                        | ATV-CM                                           | IE-85U   |                                                  |                                                  | PROJECT NUMBER 739855.01002                   | Near Lake Sho         | re Housing                                |  |  |  |  |
|                     | OUNDW                  | ATER OB                                          | SERVATIO | ONS                                              | ı                                                | W41 7015                                      | Location Plan         | <b>♦</b>                                  |  |  |  |  |
| Water<br>Level (bgs |                        |                                                  |          | 1                                                |                                                  | Weather: Sunny - 70'F                         |                       | Ņ                                         |  |  |  |  |
| Date                |                        |                                                  | + + -    | 1                                                | <del>                                     </del> | <b>Date/Time Start:</b> August 6, 2002 - 0940 | See Site Pla          | n .                                       |  |  |  |  |
| Time                |                        |                                                  |          | 1                                                | 1                                                | Anne Cont of 1 Cont of 2002 07 10             | See Site I id         |                                           |  |  |  |  |
| Meas.               |                        |                                                  |          |                                                  |                                                  | Date/Time Finish: August 6, 2002 - 1417       |                       |                                           |  |  |  |  |
| From                | 6 1                    |                                                  |          |                                                  |                                                  | FIELD IDENTIFICATION OF MATERIAL              | COMENANTIC            | COMMENTE                                  |  |  |  |  |
| Sample<br>Depth     | Sample<br>I.D.         | SPT                                              | % Rec.   | PID                                              | (ppm)                                            |                                               | SCHEMATIC             | COMMENTS                                  |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       | PVC sump (18'-19')                        |  |  |  |  |
| 19                  |                        |                                                  |          |                                                  |                                                  |                                               |                       | PVC end cap                               |  |  |  |  |
| 20                  |                        | <del>                                     </del> | <u> </u> | +                                                |                                                  | }                                             |                       | 20'                                       |  |  |  |  |
|                     |                        | <u> </u>                                         |          | 1                                                |                                                  | Boring terminated at 20 feet bgs.             | 199999                | <del></del>                               |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          | 1                                                |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        | <u> </u>                                         |          | 1                                                |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        | <del>                                     </del> | 1        | 1                                                |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        | -                                                |          | 1                                                |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        | <del>                                     </del> | 1        | 1                                                |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        | 1                                                |          | 1                                                |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  | -        | <del>                                     </del> |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        | <del>                                     </del> |          | +                                                |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        | <del>                                     </del> | 1        | 1                                                |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          | 1                                                |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     |                        |                                                  |          |                                                  |                                                  | COMMENTS:                                     |                       |                                           |  |  |  |  |
| SAMPLING METHOD     |                        |                                                  |          |                                                  |                                                  | See page 1 comments.                          |                       |                                           |  |  |  |  |
|                     | SS = SPLIT SPOON       |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     | A = AUGER<br>C = CORED | CUTTINGS                                         |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |
|                     | C - COKED              |                                                  |          |                                                  |                                                  |                                               |                       |                                           |  |  |  |  |

| Contracto            | r:               |       | SJB            |          |      |           | PARSONS<br>DRILLING RECORD                                                        | BORING/<br>WELL NO. M                        | Sheet 1 of 1<br>W-119-3                  |
|----------------------|------------------|-------|----------------|----------|------|-----------|-----------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------|
| Driller:             | •                |       | Walt Kett      | er       |      |           |                                                                                   | Location Descripti                           |                                          |
| Inspector:           |                  |       | Ed Ashtor      |          |      |           | PROJECT NAME: Seneca Army Depot-SEAD 119                                          | Former Small                                 |                                          |
| Rig Type:            | -                |       | ATV-CM         | E-850    |      |           | PROJECT NUMBER 739855.01002                                                       | Near Lake Sho                                |                                          |
|                      |                  |       |                |          |      |           |                                                                                   |                                              |                                          |
| GF<br>Water          | ROUNI            | )WA   | TER OBS        | ERVA     | TIO  | NS        | Wasakan Clauda 2000                                                               | Location Plan                                | <b>.</b>                                 |
| Water<br>Level (bgs) | 8.62'            |       |                |          |      |           | Weather: Cloudy - 80'F                                                            | $\dashv$                                     | N                                        |
| Date                 | 8/8/02           |       |                |          |      |           | <b>Date/Time Start:</b> August 5, 2002 - 1130                                     | See Site Pla                                 | n                                        |
| Time                 | 0844             |       |                |          |      |           | 2400 Time Start 1 148600 0, 2002 1150                                             |                                              |                                          |
| Meas.                |                  |       |                |          |      |           | Date/Time Finish: August 5, 2002 - 1630                                           |                                              |                                          |
| From                 | TOC              |       |                |          |      |           |                                                                                   |                                              | -                                        |
| Sample               | Sam              | -     | SPT            | % R      | lec. |           | FIELD IDENTIFICATION OF MATERIAL                                                  | SCHEMATIC                                    | COMMENTS                                 |
| Depth<br>+3          | I.I              | ).    |                | 1        |      | PID (ppm) |                                                                                   |                                              |                                          |
| 13                   |                  |       |                |          |      |           |                                                                                   |                                              |                                          |
| +2                   |                  |       |                |          |      |           |                                                                                   |                                              |                                          |
| _                    |                  |       |                |          |      |           |                                                                                   |                                              | Steel Protective Casing                  |
| +1                   |                  |       |                |          |      |           |                                                                                   |                                              | Ī                                        |
|                      |                  |       | -              |          |      |           |                                                                                   |                                              | 2-inch ID PVC Riser                      |
| 0                    |                  |       |                |          |      | 37.       | (0140) 70                                                                         |                                              | Sch 40                                   |
| 1                    | 1                |       | 8              | 50       | '    | NA        | (0'-2'):Brown, silt with fine sand, roots, trace fine gravel, dry. (SM)           |                                              | 0 1/01:                                  |
| 1                    | 1                |       | 8              | -        |      |           |                                                                                   |                                              | Grout (0'-1.5')                          |
| 2                    |                  |       | 10             |          |      |           |                                                                                   | 88888                                        | Bentonite Chips                          |
|                      |                  |       | 18             | 50       | )    | NA        | (2'-4'):Brown, silt with trace-fine sand, fragments of black shale,               |                                              | (1.5'-2.5')                              |
| 3                    |                  |       | 25             |          |      |           | dry. (ML/SM)-Till                                                                 |                                              | Morie #000 Sand                          |
|                      |                  |       | 25             |          |      |           |                                                                                   |                                              | (2.5'-2.75')                             |
| 4                    |                  |       | 37             | 00       |      | 27.4      | (41.6) 75 - 71 - 71 - 71 - 71 - 71 - 71 - 71 -                                    |                                              |                                          |
| 5                    |                  |       | 13             | 80       | '    | NA        | (4'-6'):Brown, silt with fine sand, trace-fine gravel, trace clay, d (ML/SM)-Till |                                              | Morie #00 Sand                           |
| 3                    |                  |       | 16             |          |      |           | (WL/SW)-1III                                                                      |                                              | (2.75'-16')                              |
| 6                    |                  |       | 19             |          |      |           |                                                                                   |                                              | (2.70 10)                                |
|                      |                  |       | 13             | 40       | )    | NA        | (6'-7.5'): Same As Above With the Exception of Fragments                          |                                              | Water table (6.60')                      |
| 7                    |                  |       | 21             |          |      |           | Black Shale Present. (ML/SM)- Til                                                 |                                              |                                          |
| 0                    |                  |       | 32             |          |      |           | Refusal at 7.5 feet. Drilled to 8 feet with HSAs                                  |                                              |                                          |
| 8                    |                  |       | 50/.0          | 20       | ١    | NA        | (8'-8.8'): Same As Above. (ML/SM)-Til                                             |                                              | 2-inch ID, SCH 40, PVC                   |
| 9                    |                  |       | 50/.3          | 20       |      | INA       | Refusal at 8.8 feet. Drilled to 10 feet with HSA:                                 | <del>      -     -                    </del> | 0.01 0-in Slot Well<br>Screen (3' - 13') |
|                      |                  |       |                |          |      |           |                                                                                   |                                              |                                          |
| 10                   |                  |       |                |          |      |           |                                                                                   |                                              |                                          |
|                      |                  |       | 32             | 10       | )    | NA        | (10'-10.9'):Brown, silt with black shale, trace fine sand, dry. (ML/SM)-T         |                                              |                                          |
| 11                   | ļ                |       | 50/.4          | <u> </u> |      |           | Refusal at 10.9 feet. Drilled to 12 feet with HSA:                                |                                              |                                          |
| 12                   | 1                |       |                | 1        |      |           |                                                                                   |                                              |                                          |
|                      |                  |       | 34             | 10       | )    | NA        | (12'-12.6'): Grey, silt with clay, black shale, moist to wet at 12.6 fe           |                                              |                                          |
| 13                   |                  |       | 50/.1          | T        |      |           | (ML/SM)-Till.                                                                     |                                              |                                          |
|                      |                  |       |                |          |      |           | Refusal at 12.6 feet. Drilled to 14 feet with HSA:                                |                                              | PVC Sump (13'-14')                       |
| 14                   |                  |       |                |          |      |           |                                                                                   |                                              | PVC end cap                              |
| 1.5                  | <u> </u>         |       | 50/.0          | 0        |      | NA        | Refusal at 14.0 feet; Tip of spoon wet                                            |                                              |                                          |
| 15                   | <u> </u>         |       |                | -        |      |           | Drilled to 16 feet with HSAs.                                                     |                                              | 16'                                      |
| 16                   |                  |       |                | 1        |      |           |                                                                                   | <u>#8:3:6:3:3</u>                            | 10                                       |
|                      |                  |       |                |          |      |           | Boring terminated at 16 feet bgs.                                                 | <del>- </del>                                |                                          |
| 17                   |                  |       |                |          |      |           |                                                                                   |                                              |                                          |
| 10                   |                  |       | -              |          |      |           |                                                                                   |                                              |                                          |
| 18                   | <u> </u>         |       |                | <u> </u> |      |           | (COLD MINE)                                                                       |                                              |                                          |
|                      | G 4 2 55-        | nic - | ATTENTION .    |          |      |           | COMMENTS:                                                                         |                                              |                                          |
|                      | SAMPL<br>SS = SP |       | METHOD<br>POON |          |      |           | No environmental samples collected.                                               |                                              |                                          |
|                      |                  |       | UTTINGS        |          |      |           |                                                                                   |                                              |                                          |
|                      | C = COI          |       |                |          |      |           |                                                                                   |                                              |                                          |

## Table 3-7 SEAD-121C - Monitoring Well Construction Details

## SEAD-121C AND SEAD-121I RI REPORT Seneca Army Depot Activity - Romulus, New York

| Well     | Well | Point of Well  | Point of Well | Diameter | Diameter | Well   | Scree | ened   | Interval | Well      | Ground    | Elevation of | Elevation of | Height of    | Well     | Well     |
|----------|------|----------------|---------------|----------|----------|--------|-------|--------|----------|-----------|-----------|--------------|--------------|--------------|----------|----------|
| ID       | Type | Relative to    | Relative to   | of       | of       | Screen | Re    | elativ | ve to    | Screen    | Surface   | Top of PVC   | Top of       | PVC Well     | Casing   | Screen   |
|          |      | Ground Surface | Top of PVC    | Boring   | Well     | Length | 7     | ГОС    | (ft)     | Slot Size | Elevation | Well (MSL)   | Casing       | Stickup (ft) | Material | Material |
|          |      | (ft)           | (ft)          | (in)     | (in)     | (ft)   |       |        |          | (in)      |           |              |              |              |          |          |
| MW121C-3 | T/WS | 724.20         | 725.61        | 6        | 2        | 5      | 2.80  | to     | 7.80     | 0.010     | 732.00    | 733.41       | 733.70       | 1.41         | PVC      | PVC      |
| MW121C-4 | T/WS | 720.29         | 721.63        | 6        | 2        | 5      | 4.61  | to     | 9.61     | 0.010     | 729.90    | 731.24       | 731.40       | 1.34         | PVC      | PVC      |
| MW121C-5 | T/WS | 720.84         | 722.54        | 6        | 2        | 5      | 4.76  | to     | 9.76     | 0.010     | 730.60    | 732.30       | 732.50       | 1.70         | PVC      | PVC      |
| MW121C-6 | T/WS | 725.50         | 726.88        | 6        | 2        | 5      | 2.20  | to     | 7.20     | 0.010     | 732.70    | 734.08       | 734.30       | 1.38         | PVC      | PVC      |

Notes:

T/WS = Till Weathered Shale Aqufier

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|                                 |                |                                                                |                              | OVER                | BURD                  | EN BO                                 | RING RE                               | PORT                       |                                  | •                                        |
|---------------------------------|----------------|----------------------------------------------------------------|------------------------------|---------------------|-----------------------|---------------------------------------|---------------------------------------|----------------------------|----------------------------------|------------------------------------------|
|                                 |                | PA                                                             | RSOI                         |                     |                       |                                       | LISACOE                               |                            | NG NO.:                          | mw Demo-3                                |
| PROJECT                         | Γ:             |                                                                | PE                           | 2                   |                       |                                       |                                       | START D                    |                                  | iolzalor                                 |
| SWMU#                           |                | : .                                                            | DRY                          |                     | •                     |                                       | · · · · · · · · · · · · · · · · · · · | FINISH E                   |                                  | 10/2:102                                 |
| SOP NO.                         |                | •                                                              |                              | 1175                |                       |                                       | <u></u>                               | CONTRA                     |                                  | Lyon Inlly                               |
| <del></del>                     |                |                                                                |                              |                     | JMMARY                | · · · · · · · · · · · · · · · · · · · |                                       | DRILLER                    | -                                | Aam / Kil                                |
| DRILLING                        | HOLE           | DEP                                                            |                              | <u> </u>            | PLER .                | · .                                   | :<br>HAMMER                           | INSPECT                    |                                  | Jens Ben                                 |
| METHOD                          | DIA.(ft)       | INTERV                                                         | AL (ft)                      | SIZE                | ТҮРЕ                  | ТҮРЕ                                  | WT/FALL                               | CHECKE                     | BY:                              |                                          |
| H-A                             |                | 0-8                                                            |                              | 2"                  | SS                    |                                       |                                       | CHECK I                    | DATE:                            |                                          |
|                                 |                |                                                                |                              | -                   |                       |                                       |                                       | BORING (                   | ONVERTED                         | TO MW? . (Y) N                           |
| HSA<br>DW<br>MRSLC<br>CA<br>SPC |                | HOLLOW-SI<br>DRIVE-AND<br>MUD-ROTAL<br>CASING AD<br>SPIN CASIN | -WASH<br>RY SOIL-C<br>VANCER | • •                 | DRII  HMR SHR HHR DHR | SAFETY H HYDRAUL DOWN-HO              | IAMMER IC HAMMER LE HAMMER            | SS<br>CS<br>51<br>NS<br>ST | 5 FT INTER                       | US SAMPLING<br>VAL SAMPLING<br>NG<br>IBE |
| ··                              | ·              | <del></del> -                                                  |                              | MO                  | NITORIN               | IG EQUPM                              | IENT SUMMA                            | ARÝ                        |                                  |                                          |
| INSTRU                          | MENT           | DETEC                                                          | TOR                          | RANGE               |                       | BACKGRO                               | •                                     |                            | RATION                           | WEATHER                                  |
| TYF                             | Έ              | TYPE/EN                                                        | IERGY                        |                     | . READING             | TIME                                  | DATE                                  | TIME .                     | DATE                             | (TEMP., WIND, ETC.)                      |
| -                               |                |                                                                | ,                            |                     |                       |                                       |                                       |                            |                                  |                                          |
|                                 |                |                                                                |                              |                     |                       |                                       |                                       |                            |                                  |                                          |
|                                 | •              |                                                                |                              |                     |                       |                                       |                                       |                            |                                  |                                          |
|                                 | • :            |                                                                |                              |                     |                       |                                       |                                       |                            |                                  |                                          |
|                                 |                |                                                                |                              |                     |                       |                                       |                                       |                            |                                  |                                          |
|                                 |                |                                                                |                              |                     |                       |                                       |                                       |                            |                                  |                                          |
| PID<br>FID<br>GMD<br>SCT        |                | PHOTO - IOI<br>FLAME - IOI<br>GEIGER MU<br>SCINTILLAT          | NIZATION<br>JELLER D         | DETECTOR<br>ETECTOR | MONI' BGC CPM PPM RAC | BACKGRO COUNTS I PARTS PE             | PER MINUTE<br>R MILLION               | DGRT PPB MDL               | DRAEGER<br>PARTS PER<br>METHOD I |                                          |
|                                 |                |                                                                |                              | INV                 | ESTIGAT               | TION DERI                             | VED WASTE                             | •                          | <del></del>                      |                                          |
|                                 | DATE<br>L AMOU | UNT:                                                           |                              | )/29/02<br>1/2 drem | ·<br>)                |                                       |                                       |                            |                                  |                                          |
| DRUM                            | 1 #, LOC       | CATION:                                                        |                              |                     |                       | <u> </u>                              |                                       |                            |                                  |                                          |
|                                 | MMEN           |                                                                |                              |                     |                       |                                       | SAMPLES                               | TAKEN:                     | none                             |                                          |
|                                 |                |                                                                |                              |                     |                       |                                       | DUPLICATES                            |                            |                                  |                                          |
|                                 |                |                                                                |                              |                     |                       |                                       | MS/MSD                                |                            |                                  |                                          |
|                                 |                |                                                                |                              |                     |                       |                                       | MRD                                   |                            |                                  |                                          |

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|                                       |          |                                                               |                                        | OVÈR            | BURD                     | EN BO        | RING RE                |                                                  |                                                   |                                         |
|---------------------------------------|----------|---------------------------------------------------------------|----------------------------------------|-----------------|--------------------------|--------------|------------------------|--------------------------------------------------|---------------------------------------------------|-----------------------------------------|
|                                       |          | PA                                                            | RSO                                    | NS              |                          | CLIENT       | WACOE                  | BORI                                             | NG NO.:                                           | Mw Dremo-4                              |
| PROJECT :                             | : -,     |                                                               | Pti                                    | 0               |                          | ·            |                        | START I                                          |                                                   | 10/29/02                                |
| SWMU#(A                               | AREA)    | :                                                             | DKI                                    | MO .            |                          | -            |                        | FINISH                                           |                                                   | <u>νοια την-</u>                        |
| SOP NO.:                              | •        |                                                               | •                                      | 1175            | **                       |              |                        | CONTRA                                           | CTOR: -                                           | Hum Lun Dolla                           |
|                                       |          |                                                               |                                        |                 | ÜMMARY                   |              |                        | DRILLE                                           | •                                                 | Ham I Rak                               |
| DRILLING                              | HOLE     | DEP                                                           | тн                                     | SAN             | <b>MPLER</b>             |              | HAMMER                 | INSPECT                                          | or: Te                                            | em Ben                                  |
| METHOD. 1                             | DIA.(ft) | INTERV                                                        | AL (ft)                                | SIZE .          | TYPE .                   | TYPE         | WT/FALL                | СНЕСКЕ                                           |                                                   |                                         |
| HSA                                   | 414      | 0-8                                                           | }                                      | 2"              | SS                       |              |                        | CHECK                                            | DATE:                                             |                                         |
|                                       |          |                                                               |                                        |                 |                          |              |                        | BORING                                           | CONVERTED                                         | TO MW? (Y) N                            |
| . :                                   | •        | •                                                             |                                        | •               | DRII                     | LING AC      | RONYMS                 | • •                                              | -                                                 |                                         |
| DW<br>MRSLC<br>CA<br>SPC              |          | HOLLOW-ST<br>DRIVE-AND<br>MUD-ROTA<br>CASING AD<br>SPIN CASIN | -WASH<br>RY SOIL-C<br>VANCER           |                 | HMR<br>SHR<br>HHR<br>DHR | SAFETY H     | IC HAMMER<br>LE HAMMER | SS<br>CS.<br>5I<br>NS<br>ST<br>3S                |                                                   | JS SAMFLING<br>VAL SAMPLING<br>NG<br>BE |
|                                       |          | •                                                             | ······································ | MC              | NITODIN                  | C FOUR       | IENT SUMMA             | DV                                               | <u> </u>                                          |                                         |
| INSTRUME                              | ENT      | DETEC                                                         | CTOR                                   | RANGE           |                          | BACKGRO      |                        |                                                  | BRATION                                           | WEATHER                                 |
| ТҮРЕ                                  |          | TYPE/EN                                                       |                                        | ·               | READING                  | TIME         | · DATE                 | TIME                                             | DATE                                              |                                         |
|                                       | .        |                                                               |                                        |                 | ·                        | 1,1,12       |                        |                                                  | DATE                                              | (TEMP., WIND, ETC.)                     |
|                                       |          |                                                               |                                        |                 |                          | <del> </del> |                        | <del>                                     </del> |                                                   | · · · · · · · · · · · · · · · · · · ·   |
|                                       |          |                                                               |                                        |                 |                          |              |                        | _                                                | <del>                                     </del>  |                                         |
| · · · · · · · · · · · · · · · · · · · |          |                                                               |                                        |                 |                          |              |                        |                                                  | <del>  `                                   </del> |                                         |
|                                       |          |                                                               |                                        |                 |                          |              |                        | <del></del>                                      |                                                   |                                         |
|                                       |          |                                                               |                                        |                 |                          |              |                        | <u> </u>                                         | <u> </u>                                          |                                         |
|                                       |          |                                                               |                                        |                 | MONI                     | CORING A     | CRONYMS                | <del>.,l</del>                                   | · · · · · · · ·                                   | <u>L</u> .                              |
| PID                                   |          | 101 - ОТОНЧ                                                   | NOITASIN                               | DETECTOR        | BGD                      | BACKGRO      |                        | DGRT                                             | DRAEGER T                                         | TUBES                                   |
| FID                                   |          |                                                               |                                        | DETECTOR        | СРМ                      | COUNTS I     | PER MINUTE             | PPB                                              | PARTS PER                                         | BILLION                                 |
| GMD<br>SCT                            |          | GEIGER MU<br>SCINTILLAT                                       |                                        |                 | PPM<br>RAD               |              | R MILLION              | MDL                                              | METHOD D                                          | ETECTION LIMIT                          |
|                                       |          |                                                               | HON DET                                | SCIOR .         |                          | RADIATIO     | N METER                | ·                                                |                                                   |                                         |
|                                       |          |                                                               |                                        | INV             | ESTIGAT                  | ION DERI     | VED WASTE              |                                                  | ,                                                 |                                         |
| . I                                   | DATE     |                                                               | 10                                     | 1-1             |                          |              |                        |                                                  |                                                   |                                         |
| SOIL                                  | AMOU     | NT:                                                           | <u> 10</u>                             | 29/02<br>. Chum | -                        |              |                        | -                                                |                                                   |                                         |
| (fract                                | ion of a | irum)                                                         | 1/2                                    | - chum          | /                        |              |                        |                                                  |                                                   |                                         |
| DRUM#                                 | , LOC    | ATION:                                                        |                                        |                 | ·                        |              |                        |                                                  | *                                                 |                                         |
| COM                                   | 1MEN     | ΓS:                                                           |                                        |                 |                          |              | SAMPLES T              | AKEN:                                            | None                                              |                                         |
|                                       |          |                                                               |                                        |                 |                          |              | SAMPLES                |                                                  |                                                   |                                         |
|                                       |          |                                                               |                                        |                 |                          |              | DUPLICATES             |                                                  |                                                   |                                         |
|                                       |          |                                                               |                                        |                 |                          |              | MS/MSD                 |                                                  |                                                   |                                         |
|                                       |          |                                                               |                                        |                 |                          |              | MRD                    |                                                  |                                                   | ······································  |

| OVERBURDEN BORING REPORT                         |                  |                                                                                                                   |       |          |  |  |  |  |  |  |  |
|--------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------|-------|----------|--|--|--|--|--|--|--|
| PARSONS CLIENT: WA COE BORING NO.: INW DICTIO -4 |                  |                                                                                                                   |       |          |  |  |  |  |  |  |  |
| COMMENTS:                                        |                  |                                                                                                                   |       |          |  |  |  |  |  |  |  |
|                                                  |                  | DRILLER: Hany Lyon / Rick INSPECTOR: Russmunn / mcAllists                                                         |       |          |  |  |  |  |  |  |  |
|                                                  |                  | DATE: 10kg/ov                                                                                                     |       |          |  |  |  |  |  |  |  |
| D SAMPLING E P BLOWS   PENE- RECOV-              | SAMPLE RAD       | SAMPLE<br>DESCRIPTION                                                                                             | USCS  | STRATUM  |  |  |  |  |  |  |  |
| T PER TRATION ERY H 6 RANGE RANGE                | INT NO. VOC SCRN | (As per Burmeister: color, grain size, MAJOR COMPONENT, Minor Components                                          | CLASS | CLASS    |  |  |  |  |  |  |  |
| (FT) INCHES (FEET) (FEET)                        |                  | with amount modifiers and grain-size, density, stratification, wetness, etc.)  MWH Brown (alk) STLT last 3" 9" cf | - A   |          |  |  |  |  |  |  |  |
| 8 2' 1'                                          |                  | - rock (ory)                                                                                                      | W5    | 4        |  |  |  |  |  |  |  |
| 7                                                |                  | _                                                                                                                 |       | . =      |  |  |  |  |  |  |  |
| 2 5                                              |                  | muist Grey SFLT w/some dhy weathered Stale last 2" truce of clay.                                                 | m L   | ]        |  |  |  |  |  |  |  |
| $\frac{1}{10}$ 2' 1'                             |                  | - last 2" truce of day.                                                                                           | ,,,_  | $\dashv$ |  |  |  |  |  |  |  |
| 4 32                                             |                  |                                                                                                                   |       |          |  |  |  |  |  |  |  |
| 24                                               |                  | Dg wewthered shale                                                                                                | _     | _        |  |  |  |  |  |  |  |
| 5 542" 8" 6"                                     |                  | _ `                                                                                                               |       |          |  |  |  |  |  |  |  |
| 6 61/1                                           |                  | Dia Maria D. C. a. S. Lia                                                                                         |       | 4        |  |  |  |  |  |  |  |
| <del>                                    </del>  |                  | _no recovery_ Refusal Splot spon                                                                                  |       |          |  |  |  |  |  |  |  |
|                                                  |                  |                                                                                                                   |       | _        |  |  |  |  |  |  |  |
| 8                                                |                  | _                                                                                                                 |       | =        |  |  |  |  |  |  |  |
|                                                  |                  | -                                                                                                                 |       |          |  |  |  |  |  |  |  |
| 10                                               |                  | -                                                                                                                 |       | -        |  |  |  |  |  |  |  |
|                                                  |                  |                                                                                                                   |       |          |  |  |  |  |  |  |  |
|                                                  |                  |                                                                                                                   |       | _        |  |  |  |  |  |  |  |
|                                                  |                  |                                                                                                                   |       |          |  |  |  |  |  |  |  |
|                                                  |                  |                                                                                                                   |       | _        |  |  |  |  |  |  |  |
|                                                  |                  |                                                                                                                   |       | -        |  |  |  |  |  |  |  |
|                                                  |                  |                                                                                                                   |       |          |  |  |  |  |  |  |  |
| 15                                               |                  |                                                                                                                   |       | _        |  |  |  |  |  |  |  |
|                                                  |                  |                                                                                                                   |       |          |  |  |  |  |  |  |  |
|                                                  | _                |                                                                                                                   |       |          |  |  |  |  |  |  |  |
|                                                  |                  | -                                                                                                                 |       | -        |  |  |  |  |  |  |  |
|                                                  |                  | <u> </u>                                                                                                          |       |          |  |  |  |  |  |  |  |
|                                                  | -                | <u> </u>                                                                                                          |       | -        |  |  |  |  |  |  |  |
|                                                  |                  | <u> </u>                                                                                                          |       | _        |  |  |  |  |  |  |  |
|                                                  |                  | <u> </u>                                                                                                          |       |          |  |  |  |  |  |  |  |
| 20                                               |                  |                                                                                                                   | -     |          |  |  |  |  |  |  |  |

PAGE 1 OI

|                                       |                    |                                                    |                                | OVER                         | BURD                     | EN BO                           | RING RE                        | PORT                       | ·                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------|--------------------|----------------------------------------------------|--------------------------------|------------------------------|--------------------------|---------------------------------|--------------------------------|----------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                       |                    | PA                                                 | RSO                            | NS                           |                          | CLIENT:                         | WACOE                          | BORI                       | NG NO.:                                          | MWDRMO-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| PROJEC                                | Γ:                 |                                                    |                                | PIO                          |                          |                                 |                                | START I                    | DATE:                                            | 10/29/02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| SWMU#                                 | (AREA)             | :                                                  |                                | DILMO.                       |                          |                                 |                                | FINISH I                   | DATE:                                            | <del></del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| SOP NO.                               | <br>:              |                                                    |                                | 741175                       |                          |                                 |                                | CONTRA                     | -*                                               | Luan Dolly                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                       |                    |                                                    | DRII                           | LING SU                      | JMMARY                   |                                 |                                | DRILLER                    | t:                                               | Hum I Rock                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| DRILLING                              | HOLE               | DEF                                                | тн                             | SAM                          | PLER                     |                                 | HAMMER                         | INSPECT                    | OR:                                              | Ben / Jenu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| METHOD                                | DIA.(ft)           | INTERV                                             | /AL (ft)                       | SIZE                         | ТҮРЕ                     | ТҮРЕ                            | WT/FALL                        | СНЕСКЕ                     | D BY:                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| ASA                                   | . G"               | 0-                                                 | 8                              | 2"                           | SS                       |                                 |                                | СНЕСК                      | DATE:                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                       |                    |                                                    |                                |                              | •                        |                                 |                                | BORING                     | CONVERTED                                        | TO MW? (Y) N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                       | • :                | •                                                  |                                |                              | DRII                     | LLING AC                        | RONYMS                         | •                          |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| HSA<br>DW<br>MRSLC<br>CA              | •                  | HOLLOW-S DRIVE-ANI MUD-ROTA CASING AI SPIN CASIN   | O-WASH<br>RY SOIL-C<br>OVANCER | CORING                       | HMR<br>SHR<br>HHR<br>DHR | SAFETY H<br>HYDRAUL<br>DOWN-HO  |                                | SS<br>CS<br>5I<br>NS<br>ST |                                                  | US SAMPLING<br>VAL SAMPLING<br>ING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| agentin Security                      | C LEMPS SERVICE    |                                                    |                                | and the second of the second |                          |                                 | Terresia de la composición de  | 3S                         | 3 INCH SPL                                       | <ul> <li>Comment of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution of the second contribution</li></ul> |
|                                       |                    | <del></del>                                        |                                | MO                           | NITORIN                  | G EOUPN                         | IENT SUMMA                     | RV                         | <u>···</u>                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| . INSTRU                              | MENT               | DETE                                               | CTOR                           | RANGE                        | ·                        | BACKGRO                         |                                |                            | BRATION                                          | WEATHER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| TY                                    |                    | TYPE/E                                             |                                |                              | READING                  | TIME                            | DATE                           | TIME                       | DATE                                             | (TEMP., WIND, ETC.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                       |                    |                                                    | 121,031                        |                              | Tagabaro .               | . Interest                      | DAIL                           | , mile                     | DATE                                             | (TEMF., WIND, ETC.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                       |                    |                                                    |                                |                              |                          |                                 | <u> </u>                       | <u> </u>                   |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                       |                    |                                                    |                                |                              |                          |                                 |                                |                            |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                       |                    |                                                    |                                |                              |                          | <del>-</del>                    |                                | <del> </del>               | <del>                                     </del> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                       |                    |                                                    |                                |                              |                          |                                 |                                |                            | 1.                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <u> </u>                              |                    |                                                    |                                |                              |                          | 1 .                             |                                | <u> </u>                   | <u> </u>                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                       |                    |                                                    |                                |                              | MONIT                    | FORING A                        | CRONYMS                        |                            | <u> </u>                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| PID<br>FID<br>GMD<br>SCT              |                    | PHOTO - IO<br>FLAME - IO<br>GEIGER MI<br>SCINTILLA | NIZATION<br>UELLER D           | ETECTOR                      | BGD<br>CPM<br>PPM<br>RAD | BACKGRO<br>COUNTS E<br>PARTS PE | UND<br>PER MINUTE<br>R MILLION | DGRT<br>PPB<br>MDL         | DRAEGER<br>PARTS PER<br>METHOD I                 | · .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| · · · · · · · · · · · · · · · · · · · |                    |                                                    | -                              | INV                          | ESTIGAT                  | ION DERI                        | VED WASTE                      | ·····                      |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                       | DATE               |                                                    |                                | , 7                          |                          | 1                               | ····                           |                            |                                                  | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                       | •                  |                                                    | $t_0$                          | 1/24/02                      |                          |                                 |                                |                            |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                       | L AMOU<br>ction of |                                                    |                                | 1/2 drum                     | J                        |                                 |                                |                            |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| DRUM                                  | I#, LOC            | ATION:                                             |                                |                              |                          |                                 |                                |                            |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| CC                                    | MMEN               | TS:                                                |                                | ·                            |                          |                                 | SAMPLES 7                      | ΓAKEN:                     | none                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                       |                    |                                                    |                                |                              |                          |                                 | SAMPLES                        |                            |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                       |                    |                                                    |                                |                              |                          |                                 | DUPLICATES                     |                            |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                       |                    |                                                    |                                |                              |                          |                                 | MS/MSD                         |                            |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1                                     |                    |                                                    |                                |                              |                          |                                 | MRD                            |                            |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|                               | OVERBURDEN BORING REPORT    |                                     |                                  |                        |            |     |             |                                                                                         |                                                                    |            |               |                  |  |
|-------------------------------|-----------------------------|-------------------------------------|----------------------------------|------------------------|------------|-----|-------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------|---------------|------------------|--|
|                               |                             | ı                                   | PARS                             | 30N9                   | <b>3</b> . |     |             | CLIENT: US A COE                                                                        | BORING NO.:                                                        | mwormo -   | -6            |                  |  |
| COM                           | MENTS:                      |                                     |                                  |                        |            | •   |             |                                                                                         | DRILLER: INSPECTOR: DATE:                                          | Hurry Lyon | mcAu          | ister_           |  |
| D<br>E<br>P<br>†<br>H<br>(FT) | BLOWS<br>PER<br>6<br>INCHES | PENE-<br>TRATION<br>RANGE<br>(FEET) | RECOV-<br>ERY<br>RANGE<br>(FEET) | DEPTH<br>INT<br>(FEET) | SAM<br>NO. | VOC | RAD<br>SCRN | DESCR<br>(As per Burmeister: color, grain size, M<br>with amount modifiers and grain-si | MPLE<br>RIPTION<br>IAJOR COMPONENT,<br>ize, density, stratificatio | <i> </i>   | USCS<br>CLASS | STRATUM<br>CLASS |  |
| _                             | 10                          | z'                                  | 344                              |                        |            |     |             | - Rocky Fill                                                                            |                                                                    |            | 1             | -                |  |
| 2-<br>-                       | 8 4 9                       | J'                                  | 1                                |                        |            |     |             | most wdy Brownsit                                                                       |                                                                    |            | ML            | -<br>-<br>-<br>- |  |
| 4<br>5                        | # 8<br>50/2°                | 8,,                                 | ·\$11                            |                        |            |     |             | Dry weathered shale  Dry weathered shale                                                |                                                                    |            | 1             | -<br>· -         |  |
| 6-                            | 94.*                        | ı''                                 | 4"                               |                        |            |     | <u>-</u>    | Dry weatheredshale                                                                      |                                                                    |            | -             | -<br>-<br>-      |  |
| -3                            |                             |                                     |                                  |                        |            |     | <u> </u>    |                                                                                         |                                                                    |            |               | <br>             |  |
| 10_                           |                             |                                     |                                  |                        |            |     |             |                                                                                         |                                                                    |            |               | -<br>-<br>-      |  |
| <br>                          |                             |                                     |                                  |                        |            |     | <u> </u>    | <del>-</del><br>-                                                                       |                                                                    |            |               | -<br>-<br>-<br>- |  |
| 15_                           |                             |                                     |                                  |                        |            |     |             | <br>                                                                                    |                                                                    |            |               | -<br>-<br>-      |  |
|                               |                             |                                     |                                  |                        |            |     |             |                                                                                         |                                                                    |            |               | <br><br>-        |  |
| _                             |                             |                                     | :                                |                        |            |     |             |                                                                                         |                                                                    |            |               | -<br>            |  |
| 20                            |                             |                                     |                                  |                        |            |     |             |                                                                                         |                                                                    |            |               |                  |  |

|             |          |                         |                                        | OVER                | BURD                                    | EN BOI    | RING RE                               | PORT                |             |                             |  |  |
|-------------|----------|-------------------------|----------------------------------------|---------------------|-----------------------------------------|-----------|---------------------------------------|---------------------|-------------|-----------------------------|--|--|
|             |          | PA                      | RSO                                    | NS                  |                                         | CLIENT:   | WACOE                                 | BORI                | NG NO.:     | MWDEMU-5                    |  |  |
| PROJEC      | Γ:       |                         | P:                                     | ED.                 |                                         |           |                                       | START I             |             | 10/2/02                     |  |  |
| SWMU#       | (AREA)   | :                       | Di                                     | emo                 | -                                       | ·         |                                       | FINISH I            | ATE:        | 10/29/02                    |  |  |
| SOP NO.     | •,       |                         |                                        | 74/175              | -                                       |           |                                       | CONTRA              | CTOR:       | Lyon Drilling               |  |  |
|             |          |                         | DRII                                   | LING SU             | JMMARY                                  |           |                                       | DRILLER             | : •         | tary 1Rich                  |  |  |
| DRILLING    | HOLE     | DEP                     | гн                                     | · SAM               | PLER                                    | . 1       | IAMMER                                | INSPECTOR: Ben Jenn |             |                             |  |  |
| METHOD      | DIA.(ft) | INTERV                  | AL (ft)                                | SIZE                | ТҮРЕ                                    | TYPE      | WT/FALL                               | CHECKE              | CHECKED BY: |                             |  |  |
| H3A         | 6*       | 0-8                     | }                                      | 2"                  | <i>5</i> S                              |           |                                       | CHECK               | DĄTE:       |                             |  |  |
|             | 1        |                         |                                        |                     |                                         |           |                                       | BORING (            | CONVERTED   | TO MW? (Y) N                |  |  |
|             | ٠        |                         |                                        |                     | DRII                                    | LING ACI  | RONYMS.                               |                     |             |                             |  |  |
| HSA         |          | HOLLOW-S                |                                        | ERS                 | HMR                                     |           |                                       | SS                  | SPLIT SPOO  |                             |  |  |
| DW<br>MRSLC |          | DRIVE-AND<br>MUD-ROTA   |                                        | ORING               | SHR<br>HHR                              |           | AMMER<br>C HAMMER                     | ĊS<br>51            |             | US SAMPLING<br>VAL SAMPLING |  |  |
| CA          |          | CASING AL               |                                        |                     | LE HAMMER                               | NS        | NO SAMPLI                             | •                   |             |                             |  |  |
| SPC         |          | SPIN CASIN              | Ģ                                      |                     | WL                                      | WIRE-LINE |                                       | ST                  | SHELBY TU   | _                           |  |  |
|             |          |                         | • • :                                  |                     |                                         |           | r se p                                | 38                  | 3 INCH SPL  | IT SPOON                    |  |  |
|             |          |                         |                                        | RY                  | *************************************** |           |                                       |                     |             |                             |  |  |
| INSTRU      | MENT     | DETEC                   | TOR                                    | RANGE               |                                         | BACKGRO   | JND                                   | CALI                | BRATION     | WEATHER                     |  |  |
| TYI         | PE       | TYPE/E                  | IERGY                                  | -                   | READING                                 | TIME .    | DATE                                  | TIME                | DATE        | (TEMP., WIND, ETC.)         |  |  |
|             |          |                         |                                        |                     |                                         |           |                                       |                     |             |                             |  |  |
|             |          |                         |                                        |                     |                                         |           |                                       |                     |             |                             |  |  |
|             |          |                         |                                        |                     |                                         |           |                                       |                     |             |                             |  |  |
|             |          | ,                       |                                        |                     |                                         |           |                                       |                     |             |                             |  |  |
|             |          |                         |                                        |                     |                                         |           |                                       |                     |             |                             |  |  |
|             |          |                         | 4.                                     |                     |                                         |           |                                       |                     |             |                             |  |  |
|             |          |                         |                                        |                     | MONI                                    | CORING A  | CRONYMS                               | l                   | 1.          | <u> </u>                    |  |  |
| PID         |          | РНОТО - 101             | NIZATION                               | DETECTOR            | BGD                                     |           |                                       | DGRT                | DRAEGER     | TUBES                       |  |  |
| FID         |          | FLAME - IO              | NOITASIN                               | DETECTOR            | СРМ                                     | COUNTS P  | ER MINUTE                             | PPB                 | PARTS PER   | BILLION                     |  |  |
| GMD<br>SCT  |          | GEIGER MU<br>SCINTILLAT |                                        |                     | PPM<br>RAD                              |           |                                       | MDL                 | METHOD E    | DETECTION LIMIT             |  |  |
|             |          | SCHTILLA                |                                        |                     | KAD                                     | RADIATIO  | · · · · · · · · · · · · · · · · · · · |                     |             | ·                           |  |  |
|             |          |                         |                                        | INV                 | ESTIGAT                                 | ION DERI  | VED WASTE                             |                     |             |                             |  |  |
|             | DATE     |                         | ······································ | 1.1                 | · · · · · ·                             |           |                                       |                     | <del></del> | ·                           |  |  |
| SOI         | L AMOI   | JNT :                   |                                        | 1/29/62<br>1/2 drum | <u> </u>                                |           |                                       | -                   |             |                             |  |  |
|             | ction of |                         |                                        | 1/2 drun            | <u> </u>                                |           |                                       |                     |             |                             |  |  |
| DRUM        | #, LOC   | ATION:                  |                                        |                     |                                         |           |                                       |                     |             |                             |  |  |
|             | MMEN     |                         |                                        |                     | <del> </del>                            | •         | SAMPLES T                             | AKEN:               | none        |                             |  |  |
|             |          |                         |                                        |                     |                                         |           | SAMPLES                               |                     | ·           |                             |  |  |
|             |          |                         |                                        |                     |                                         |           | DUPLICATES                            |                     | <del></del> |                             |  |  |
|             |          |                         |                                        |                     |                                         |           | MS/MSD                                |                     |             |                             |  |  |
|             |          |                         |                                        |                     |                                         |           | MOUND                                 |                     |             |                             |  |  |

| Contractors NorthStor Duilling |                                |                                                  | PARSONS        |                 | BORING/ Sheet * 1 of 1 *                                               |               |             |                                                  |                             |  |  |
|--------------------------------|--------------------------------|--------------------------------------------------|----------------|-----------------|------------------------------------------------------------------------|---------------|-------------|--------------------------------------------------|-----------------------------|--|--|
|                                | Contractor: NorthStar Drilling |                                                  | īā             | DRILLING RECORD |                                                                        | LL N          |             | MW-1                                             |                             |  |  |
| Driller:<br>Inspect            |                                | S. Breed<br>E. Ashto                             |                | -               | BROWN CT MARKET GOVERNMENT DOWN CHARLES                                |               |             | escript                                          |                             |  |  |
| Rig Ty                         |                                | CME-45                                           |                |                 | PROJECT NAME:   Seneca Army Depot - SEAD 122B                          | SEE SITE PLAN |             |                                                  |                             |  |  |
| A. 6 ~ J                       | pc.                            | CATAL                                            |                | -               | 1 ROJECT NUMBER. 741401.031                                            |               |             |                                                  |                             |  |  |
| GRO                            | UNDWA                          | ATER OBS                                         | SERVA          | TIONS           |                                                                        | Loca          | ation P     | lan                                              |                             |  |  |
| Water                          |                                |                                                  |                |                 | Weather: Sunny - 75' F                                                 |               |             | <u></u>                                          |                             |  |  |
| Level                          | 6.00                           | 7.02                                             | 7.48           |                 |                                                                        | 7             |             |                                                  |                             |  |  |
| Date                           | 7/11/02                        |                                                  | 1              | 4               | Date/Time Start: 7/08/02-1020                                          |               |             | SEE S                                            | ITE PLAN                    |  |  |
| Time                           | 0830                           | 0830                                             | 1035           | <u> </u>        | <u> </u>                                                               | 7             |             |                                                  |                             |  |  |
| Meas.                          | TOC                            | TOC                                              | TOC            |                 | Date/Time Finish: 7/08/02-1530                                         | 4             |             |                                                  |                             |  |  |
| From<br>Sample                 | -                              |                                                  | 10C<br>%       | PID             | EIELD ADENIAMENCY MON OF WALEDIAY                                      | +             |             |                                                  |                             |  |  |
| Sample<br>Depth                |                                | SEL                                              | Rec.           | (ppm)           | FIELD IDENTIFICATION OF MATERIAL                                       | SC            | CHEMA       | ATIC                                             | COMMENTS                    |  |  |
| 0-2                            |                                | 1/3                                              | 50             |                 | (0'-2') Brown to Grey, roots, silt with clay, trace of fine sand       | +             | T           | T                                                | stickup casing Grout 0-1.5' |  |  |
|                                |                                | 5/8                                              | †              | <del> </del>    | and fine gravel, dry. (SM/SC)                                          |               |             | _                                                | Grout 0-1.5                 |  |  |
|                                |                                |                                                  | 1              |                 |                                                                        |               | 1           | 4                                                | Bentonite Pellets 1.5'-3.5' |  |  |
|                                |                                |                                                  |                |                 |                                                                        |               | <           | <del>                                     </del> | 2" PVC Riser                |  |  |
| 2-4                            |                                | 17/22                                            | NR             | NA              | (2'-4') No recovery in split-spoon.                                    |               |             |                                                  |                             |  |  |
|                                | <u> </u>                       | 21/20                                            | <u> </u>       | <u> </u>        |                                                                        |               |             |                                                  |                             |  |  |
|                                | <b> </b>                       | <u> </u>                                         | <u> </u>       | <u> </u>        |                                                                        | <u></u>       |             |                                                  |                             |  |  |
|                                | <b></b>                        | <u> </u>                                         | <b></b> '      | <b> </b> -      | -                                                                      |               |             | 4                                                | Filtered sand               |  |  |
| 16                             | <b></b>                        | 15/17                                            | 50             | I NTA           |                                                                        |               | <u></u>     | ]                                                | (# 00N) pack -              |  |  |
| 4-6                            | <del> </del>                   | 15/17<br>23/30                                   | 50             | NA              | (4'-6') Brown, silt with trace of clay, trace of fine sand, fine to    |               | <u> </u>    | اے ا                                             | 3.5'-4'                     |  |  |
|                                |                                | 23/30                                            | <u> </u>       | <del> </del>    | medium gravel, black shale interbedded, dry. (SM (Till))               |               |             | ] ←                                              | i illered saild (#0)        |  |  |
|                                | <del> </del>                   | <del>                                     </del> | -              | <del> </del>    | 1                                                                      |               |             |                                                  | pack - 4'-17'.5             |  |  |
|                                | <del> </del>                   | <del> </del>                                     | <del> </del> ' | <del> </del>    |                                                                        |               |             |                                                  |                             |  |  |
| 6-8                            |                                | 50/                                              | 20             | NA              | ]<br>(6'-6.8') Same as above. (SM (Till)).                             |               | <b> </b>    |                                                  | ` '                         |  |  |
|                                | <del> </del>                   | 50/.3                                            | <del> </del>   | 1114            | Note: Refusal encountered at 6.8' bgs. Course gravel of black shale    |               | <b></b> -   | 1                                                |                             |  |  |
|                                | <b> </b>                       |                                                  | <del> </del>   |                 | in tip of spoon. Drilled to 8' bgs with HSAs.                          |               | <b> </b>    | ł /                                              | •                           |  |  |
|                                |                                |                                                  |                |                 | m up of opening simou to o ogo mai rior in.                            |               | <u> </u>    | <u> </u>                                         | 0.010 Slot PVC Screen       |  |  |
|                                |                                |                                                  | <u> </u>       |                 |                                                                        |               | <del></del> |                                                  | 6'-16'                      |  |  |
| 8-10                           |                                | 50/.3                                            | 2              | NA              | (8'-8.3') Same as above. (SM (Till))                                   |               |             |                                                  | 0 .0                        |  |  |
|                                |                                |                                                  |                |                 | Note: Refusal encountered at 8.3' bgs. Black shale predominant         |               |             |                                                  | ·                           |  |  |
|                                |                                |                                                  |                |                 | in spoon. Drilled to 10' bgs with HSAs.                                |               |             |                                                  |                             |  |  |
|                                |                                |                                                  | '              |                 | ·                                                                      |               |             | `                                                |                             |  |  |
| السيا                          | <u> </u>                       | 1                                                | <u>'</u>       | '               |                                                                        |               |             |                                                  |                             |  |  |
| 10-12                          | <u> </u> '                     | 25/31                                            | 80             | NA              | (10'-11.8') Brown, silt with trace clay and interbedded shale, dry.    |               |             |                                                  |                             |  |  |
|                                | <b> </b> '                     | 50/                                              | <b> </b> '     | <b> </b> '      | (SM (Till))                                                            |               |             |                                                  |                             |  |  |
| <b></b>                        | <del> </del> '                 | 30/.3                                            | <b> </b>       | <b> </b>        | Note: Refusal encountered at 11.8' bgs. Drilled to 12' bgs with HSAs.  |               |             |                                                  |                             |  |  |
|                                | <b></b> '                      | <del>  </del>                                    | <del> </del>   | <b> </b>        |                                                                        |               |             |                                                  | ,                           |  |  |
| 12-14                          | 122B-                          | 17/25                                            | 100            | NA              | (101 140 Comp on the control (CNA (TOUR))                              |               | $\square$   |                                                  |                             |  |  |
| 12-1-                          | 1040                           | 40/40                                            | 100            | 11/7            | (12'-14') Same as above. (SM (Till))                                   |               |             |                                                  |                             |  |  |
|                                | 10.0                           | 407.10                                           |                | <b></b>         |                                                                        |               |             |                                                  |                             |  |  |
|                                |                                |                                                  |                |                 |                                                                        |               |             |                                                  |                             |  |  |
|                                |                                |                                                  |                |                 |                                                                        |               |             |                                                  |                             |  |  |
| 14-16                          |                                | 65/                                              | 10             | NA              | (14'-14.7') Brown to Grey, silt with clay and interbedded shale, wet.  | 1 1           |             |                                                  | 16'                         |  |  |
|                                |                                | 50/.2                                            |                |                 | (SM (Till))                                                            |               |             |                                                  | Sch. 40 PVC Sump            |  |  |
|                                |                                |                                                  |                |                 | Note: Refusal encountered at 14.7' bgs. Attempted to drill to 20' bgs, |               | ٦           |                                                  | 16.5' 16'-16.5'             |  |  |
|                                |                                | -                                                |                |                 | but encountered auger refusal at 17.5' bgs.                            | ١ '           |             |                                                  | 10.0                        |  |  |
| 16-18                          |                                | NA                                               | NA             | NA              |                                                                        | 1             |             |                                                  | ı<br>İ                      |  |  |
|                                | <u> </u>                       | <u> </u>                                         | <u> </u>       |                 |                                                                        |               |             |                                                  | 17.5'                       |  |  |
|                                |                                |                                                  |                |                 | Terminated soil boring at 17.5' bgs.                                   |               |             |                                                  |                             |  |  |
|                                |                                |                                                  |                |                 | COMMENTS:                                                              |               |             |                                                  |                             |  |  |
|                                |                                | IG METHO                                         | D              |                 | Collected soil sample 122B-1040 for total lead analysis.               |               |             |                                                  |                             |  |  |
|                                | SS = SPLIT SPOO                |                                                  |                |                 | 6-inch PVC sump installed at bottom of well screen.                    |               |             |                                                  |                             |  |  |
| A - AUGER CUTTINGS C - CORED   |                                |                                                  |                |                 | 2-inch well installed.                                                 |               |             |                                                  |                             |  |  |

# OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

PROTECTIVE RISER COMPLETION

|                           |             |                | TODII.      | COMIL LIE.                             | 11011      |           |               |
|---------------------------|-------------|----------------|-------------|----------------------------------------|------------|-----------|---------------|
| PARSONS                   | C           | LIENT: A       | COE         |                                        |            | WELL#:    | /             |
| PROJECT: <u>Jewelg</u>    | Kry Dast    |                |             | P                                      | ROJECT NO: | 74/40     | 1.0310        |
| LOCATION: Roma            | lus, Ny     | •              |             |                                        | INSPECTOR: | EDASC     |               |
| ·                         |             |                |             | CI                                     | HECKED BY: | E JA      | cha           |
| DRILLING CONTRACTOR:      | North Stan  | Prilling       | mc.         |                                        | POW DEPTH: | 16.5      |               |
| DRILLER:                  | Scott Bre   | 265            |             | INSTALLATION                           | N STARTED: |           |               |
| DRILLING COMPLETED:       | 7/08/02     |                | INS         | STALLATION C                           | OMPLETED:  |           |               |
| BORING DEPTH:             | 17.5'       |                |             | FACE COMPLE                            |            | 7/12      |               |
| DRILLING METHOD(S):       | Hollow Ston | augos.         | COMPLET     | TION CONTRAC                           | TOR/CREW:  | Norths    | Ta- Drilling  |
| BORING DIAMETER(S):       | 8,25        |                |             | ROCK CONFIR                            |            | y         | 7             |
| ASSOCIATED SWMU/AOC:      | SEAD-       | 1228           | ESTIMAT     | ED GROUND E                            | ELEVATION: | 631       | 14'           |
| PROTECTIVE SURFACE CAS    | SING:       | . (            |             |                                        |            |           |               |
|                           | DIAMETER:   | 4              | LENGTH:     | 3.5'                                   | _          | TOR:      | Steel         |
| RISER:                    |             |                |             |                                        |            |           |               |
| TOC: 637./6               | TYPE: -E    | 140, pvc       | DIAMETER:   | 2"                                     | LENGTH:    | 8.02'     |               |
| SCREEN:                   |             |                |             |                                        |            |           | SLOT          |
| TSC: 629.14               | TYPE:       | Lyg, prc       | DIAMETER:   | 2"                                     | LENGTH:    | 10'       | SIZE: 10-5/07 |
| POINT OF WELL: (SILT SUMP |             |                |             |                                        |            |           |               |
| YPE:                      | _ BSC: 6    | 19.14          | POW         | 6/8.64                                 | •          |           |               |
| GROUT:                    |             |                |             |                                        |            |           |               |
| TG                        | 635.14'     | ТҮРЕ: <u>4</u> | erent/Ben   | LENGTH:                                | _          | 1.5'      |               |
| SEAL: TBS:                | 6 33.64     | TYPE: _/       | Pellets     | LENGTH:                                | _          | 2'        |               |
| SAND PACK: TSP:           | 631.64      | TYPE:          | 10012 # 00N | <u>(3.5~4')</u><br>γ2. <b>L</b> ENGTH: |            | 14'       |               |
| SURFACE COLLAR:           |             |                |             |                                        |            |           |               |
| TYPE: Concreto            | RADIUS: 2   | 'x2'           | THICK       | NESS CENTER                            | ·_6′′_     | THICKNES  | S EDGE: 6"    |
| CENTRALIZER DEPTHS        |             |                |             |                                        |            |           |               |
| DEPTH 1: <u>M</u>         | DEPTH 2:    | M              | DEPTH 3     | M                                      | -          | DEPTH 4:  | NA            |
| COMMENTS:                 |             |                |             |                                        |            |           |               |
| <del>[0</del> 0           | - Boring L  | y for          | in a        | lythe de                               | Pails      |           |               |
|                           |             |                |             |                                        |            |           |               |
| )                         |             |                |             |                                        |            |           |               |
| <i>'</i>                  | * ALI       | L DEPTH MEA    | SUREMENTS   | S REFERENCED                           | TO GROUN   | D SURFACE |               |
|                           |             |                |             |                                        |            |           | ·             |

|                                |                          |                        |              |                                                                          | PARSONS                                                                        | BORING/ Sheet # 1 of 1 # |          |                                       |                       |  |  |
|--------------------------------|--------------------------|------------------------|--------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------|----------|---------------------------------------|-----------------------|--|--|
| Contractor: NorthStar Drilling |                          |                        | ır Drillin   | g                                                                        | DRILLING RECORD                                                                | WELL NO. MW-2            |          |                                       |                       |  |  |
| Driller:                       |                          | S. Breed               |              | <u>.</u>                                                                 |                                                                                | Location Description:    |          |                                       |                       |  |  |
| Inspect                        |                          | E. Ashto               |              | -                                                                        | PROJECT NAME: Seneca Army Depot - SEAD 122B                                    | SEE SITE PLAN            |          |                                       |                       |  |  |
| Rig Ty                         |                          | CME-45                 |              | -                                                                        | PROJECT NUMBER: 741401,031                                                     | 1                        |          |                                       |                       |  |  |
| 1                              |                          |                        | <del> </del> | <del>-</del>                                                             |                                                                                | 1                        |          |                                       |                       |  |  |
| GROUNDWATER OBSERVATIONS       |                          |                        |              | TIONS                                                                    |                                                                                | Loca                     | tion Pl  | an                                    |                       |  |  |
| Water                          |                          |                        |              |                                                                          | Weather: Cloudy - 65F                                                          |                          |          |                                       |                       |  |  |
| Level                          | 6.5                      | 7.38                   | 7.54         |                                                                          | ***                                                                            | 1                        |          |                                       |                       |  |  |
| Date                           | 7/12/02                  | 7/22/02                | 7/24/02      |                                                                          | Date/Time Start: 7/09/02-0920                                                  |                          | ITE PLAN |                                       |                       |  |  |
| Time                           | 0835                     | 0835                   | 1040         |                                                                          |                                                                                | 1                        |          |                                       |                       |  |  |
| Meas.                          |                          |                        |              |                                                                          | Date/Time Finish: 7/09/02-1302                                                 | 1                        |          |                                       |                       |  |  |
| From                           | TOC                      | TOC                    | TOC          |                                                                          |                                                                                |                          |          |                                       |                       |  |  |
| Sample                         | Sample                   | SPT                    | %            | PID                                                                      | FIELD IDENTIFICATION OF MATERIAL                                               | SC                       | HEMA     | TIC                                   | COMMENTS              |  |  |
| Depth                          | I.D.                     |                        | Rec.         | (ppm)                                                                    |                                                                                |                          |          |                                       | stickup casing        |  |  |
| 0-2                            |                          | 2/3                    | 50           | NA                                                                       | (0'-2') Brown, silt with clay, trace of fine sand and fine gravel, roots, dry. |                          |          | 4                                     | Grout 0'-1.5'         |  |  |
|                                |                          | 3/4                    |              |                                                                          | (SM/SC)                                                                        |                          |          |                                       |                       |  |  |
|                                |                          |                        |              | ,                                                                        |                                                                                | 1                        | 4        | Bentonite Pellets 1.5'-3.5'           |                       |  |  |
|                                |                          |                        |              |                                                                          |                                                                                |                          |          |                                       | 2" PVC Riser          |  |  |
| 2-4                            |                          | 5/8                    | 40           | NA                                                                       | (2'-4') Same as above, except no roots and color of soil brown to grey.        |                          |          |                                       |                       |  |  |
|                                |                          | 10/14                  |              |                                                                          | (SM/SC)                                                                        |                          |          |                                       |                       |  |  |
|                                |                          |                        |              |                                                                          |                                                                                |                          |          |                                       |                       |  |  |
|                                |                          | ·                      |              |                                                                          |                                                                                |                          |          |                                       | Filtered sand         |  |  |
|                                |                          |                        |              |                                                                          |                                                                                |                          | 1        | ے                                     | (#00N) pack -         |  |  |
| 4-6                            | -6 13/23 100 NA<br>35/40 |                        | NA           | (4'-6') Brown, silt with clay and interbedded shale, dry. (SM/SC (Till)) |                                                                                |                          | _        | 3.5'-4'                               |                       |  |  |
|                                |                          |                        |              |                                                                          | 1                                                                              |                          | 1        |                                       |                       |  |  |
|                                |                          | 1                      |              |                                                                          |                                                                                | 1                        |          | 1                                     |                       |  |  |
|                                |                          |                        |              |                                                                          |                                                                                |                          |          | 1                                     |                       |  |  |
|                                |                          |                        |              |                                                                          |                                                                                |                          | <        | <b>]</b>                              | 0.010 Slot PVC Screen |  |  |
| 6-8                            |                          | 50/                    | NA           | NA                                                                       | (6'-8') No recovery.                                                           |                          |          | 1                                     | 6'-15.7'              |  |  |
|                                |                          | 50/.3                  |              |                                                                          | Note: Refusal encountered at 6.8' bgs. Drilled to 8' bgs with HSAs.            |                          |          | 1                                     |                       |  |  |
|                                |                          |                        |              |                                                                          |                                                                                |                          |          | 1 ←                                   | Filtered sand (#0)    |  |  |
|                                |                          |                        | 1            |                                                                          | · ·                                                                            |                          |          | 1                                     | pack - 4'-16.5'       |  |  |
|                                |                          |                        |              |                                                                          |                                                                                |                          |          | 1                                     |                       |  |  |
| 8-10                           |                          | 50/.3                  | NA           | NA                                                                       | (8'-10') No recovery.                                                          | 1                        |          | 1                                     |                       |  |  |
|                                |                          |                        |              | 1                                                                        | Note: Refusal encountered at 8.3' bgs. Drilled to 10' bgs with HSAs.           |                          |          | 1                                     | -                     |  |  |
|                                |                          |                        |              |                                                                          | Course gravel of black shale present in tip of spoon.                          | 1                        |          | 1                                     | ,                     |  |  |
|                                |                          | <u> </u>               |              |                                                                          |                                                                                | İ                        |          | 1                                     |                       |  |  |
|                                |                          |                        |              |                                                                          |                                                                                | İ                        |          | 1                                     |                       |  |  |
| 10-12                          |                          | 37/40 50 NA (10'-11.2' |              | NA                                                                       | (10'-11.2') Brown to Grey, silt with clay and interbedded shale, dry.          |                          |          | 1                                     |                       |  |  |
|                                |                          | 50/.2                  | 1            |                                                                          | (SM/SC (Till))                                                                 | 1                        |          | 1                                     |                       |  |  |
|                                |                          |                        |              |                                                                          | ` "                                                                            |                          |          | 1                                     |                       |  |  |
|                                |                          |                        |              |                                                                          | ·                                                                              |                          |          | 1                                     |                       |  |  |
|                                |                          |                        |              |                                                                          |                                                                                | l                        |          | 1                                     |                       |  |  |
| 12-14                          |                          | 34/25                  | 100          | NA                                                                       | (12'-14') Grey, silt with clay and interbedded shale, moist. (SM/SC (Till))    |                          |          | 1                                     |                       |  |  |
|                                |                          | 23/24                  | 1            | <b>1</b>                                                                 |                                                                                | 1                        |          | 1                                     |                       |  |  |
|                                |                          | 1                      |              |                                                                          |                                                                                |                          |          | 1                                     |                       |  |  |
|                                |                          |                        | <u> </u>     |                                                                          |                                                                                |                          |          | 1                                     |                       |  |  |
|                                |                          | 1                      |              | l                                                                        |                                                                                |                          |          | 1                                     |                       |  |  |
| 14-16                          | 122B-                    | 22/24                  | 80           | NA                                                                       | (14'-16') Same as above. (SM/SC (Till))                                        | 1                        | ļ        | 1                                     |                       |  |  |
|                                | 1041                     | 33/50/                 | 1            |                                                                          | <b>1</b>                                                                       | 1                        |          | 1                                     |                       |  |  |
|                                |                          | .4                     |              | 1                                                                        | ·                                                                              | 1                        |          | 1                                     |                       |  |  |
|                                |                          |                        |              |                                                                          |                                                                                | 1                        |          | 1 _                                   | Sch. 40 PVC Sump      |  |  |
| 16-18                          |                          | 50/.3                  | 2            | NA                                                                       | (16'-16.3') Weathered black shale, wet. (Shale)                                |                          |          | <u> </u>                              | 16' 15.7'-16'         |  |  |
|                                |                          |                        |              |                                                                          | Note: Refusal encountered at 16.3' bgs. Attempted to drill to 20' bgs, but     | 1                        | 1        | •                                     | 16.5'                 |  |  |
|                                |                          | <u> </u>               | 1            | l —                                                                      | encountered auger refusal at 16.5' bgs. Boring Terminated at 16.5' bgs.        |                          |          | · · · · · · · · · · · · · · · · · · · | 1                     |  |  |
| -                              | <u></u>                  | <u> </u>               |              | <del></del>                                                              | COMMENTS:                                                                      | <u></u>                  |          |                                       |                       |  |  |
| 1                              | SAMPLIN                  | G METHO                | מכ           |                                                                          | Collected soil sample 122B-1041 for total lead analysis.                       |                          |          |                                       |                       |  |  |
| 1                              | SS - SPLIT SPO           |                        |              |                                                                          | 3-inch PVC sump installed at bottom of well screen.                            |                          |          |                                       |                       |  |  |
| 1                              | A = AUGER CU             |                        |              |                                                                          | 2-inch well installed.                                                         |                          |          |                                       |                       |  |  |
| 1                              | C - CORED                |                        |              |                                                                          |                                                                                |                          |          |                                       |                       |  |  |

# OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

PROTECTIVE RISER COMPLETION

| PARSONS                   | CLIENT: A             | COE                                     | WELL#: 2              |
|---------------------------|-----------------------|-----------------------------------------|-----------------------|
| PROJECT: Se NOCO          | a Kony Brot           | PROJECT NO:                             | 74/401.03/00          |
| LOCATION: Roma            | u/45 Ny               | INSPECTOR:                              | EDA shta              |
|                           |                       | CHECKED BY:                             | E OA skopa            |
| DRILLING CONTRACTOR:      | North Ster Polling I. | POW DEPTH:                              | 16.0'                 |
| DRILLER:                  | Scatt Breads          | INSTALLATION STARTED:                   | 7/09/02               |
| DRILLING COMPLETED:       | 7109/02               | INSTALLATION COMPLETED:                 | 7/09/02               |
| BORING DEPTH:             | 16.5'                 | SURFACE COMPLETION DATE:                | 7/12/02               |
| DRILLING METHOD(S):       | Hollar Stem auger     | COMPLETION CONTRACTOR/CREW:             | New the Stan Prilling |
| BORING DIAMETER(S):       | F. 25                 | BEDROCK CONFIRMED (Y/N?)                |                       |
| ASSOCIATED SWMU/AOC:      | SEAD-122B             | ESTIMATED GROUND ELEVATION:             | 624.83'               |
| PROTECTIVE SURFACE CAS    | SING:                 |                                         |                       |
|                           | DIAMETER: 9"          | LENGTH: 35                              | TOR: Stiel            |
| RISER:                    |                       |                                         |                       |
| тос: 626. 82              | TYPE: Sol.40, PVC     | DIAMETER: 2" LENGTH:                    | 7.99'                 |
| SCREEN:                   | t                     |                                         | SLOT                  |
| TSC: 6/8.83               | TYPE: Sch 40, PK      | DIAMETER: 2 LENGTH:                     | 9.7' SIZE: 10-Slot    |
| POINT OF WELL: (SILT SUMP |                       |                                         |                       |
| YPE:                      | BSC: 609.13           | POW: 608.83                             |                       |
| GROUT:                    |                       |                                         |                       |
| TG                        | : 629.83 TYPE:        | Grat/Bod, LENGTH:                       | 1.5'                  |
| SEAL: TBS                 |                       | Pellets LENGTH:                         | 2 '                   |
| SAND PACK: TSP            | : 621.33 TYPE:        | Mono Hann C 3.5-47<br>MOC 6-165 LENGTH: | /3'                   |
| SURFACE COLLAR:           |                       |                                         | - / 1                 |
| TYPE: (ancreto            | radius: $2 \times z'$ | THICKNESS CENTER: 6                     | THICKNESS EDGE:       |
| CENTRALIZER DEPTHS        |                       |                                         |                       |
| DEPTH 1:                  | DEPTH 2:              | DEPTH 3:                                | DEPTH 4:              |
|                           |                       |                                         |                       |
| COMMENTS:                 |                       |                                         |                       |
| J-                        | ee Boning Lag .       | for in depth det                        | ails                  |
|                           |                       |                                         |                       |
|                           |                       |                                         |                       |
|                           | * ALL DEPTH ME        | EASUREMENTS REFERENCED TO GROU          | JND SURFACE           |
|                           |                       |                                         |                       |

| -                              |                 |                                                  |          |              | PARSONS   BORING/ Sheet                                                    |                   |                             |  |  |  |
|--------------------------------|-----------------|--------------------------------------------------|----------|--------------|----------------------------------------------------------------------------|-------------------|-----------------------------|--|--|--|
| Contractor: NorthStar Drilling |                 |                                                  |          | g            | DRILLING RECORD                                                            | WELL NO.          | MW-3                        |  |  |  |
| Driller:                       |                 | S. Breed                                         |          | -            |                                                                            | Location Descript |                             |  |  |  |
| Inspect                        |                 | E. Asht                                          |          | -            | PROJECT NAME: Seneca Army Depot - SEAD 122B                                | SEE SITE PLA      | AN                          |  |  |  |
| Rig Ty                         | pe:             | CME-45                                           | <u> </u> | -            | PROJECT NUMBER: 741401.031                                                 |                   |                             |  |  |  |
| GROUNDWATER OBSERVATIONS       |                 |                                                  |          | TONS         |                                                                            | Location Plan     |                             |  |  |  |
| Water                          |                 | I                                                |          |              | Weather: Sunny - 60'F                                                      |                   |                             |  |  |  |
| Level                          | 5.6             | 6.44                                             | 6.68     |              | 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -                                    | 7                 |                             |  |  |  |
| Date                           | 7/12/02         |                                                  |          | <b></b>      | Date/Time Start: 7/10/02 - 0840                                            | SEE S             | SITE PLAN                   |  |  |  |
| Time                           | 0840            | 0840                                             | 1045     | ├            | D. 4 FF: FF: 1 G/10/00 0000                                                |                   |                             |  |  |  |
| Meas.<br>From                  | TOC             | TOC                                              | TOC      |              | Date/Time Finish: 7/10/02 - 0930                                           | -                 |                             |  |  |  |
|                                | Sample          |                                                  | %        | PID          | FIELD IDENTIFICATION OF MATERIAL                                           | SCHEMATIC         | COMMENTS                    |  |  |  |
| Depth                          | I.D.            |                                                  | Rec.     | (ppm)        |                                                                            |                   | stickup casing              |  |  |  |
| 0-2                            |                 | 5/6/                                             | 80       | NA           | (0'-2') Brown, silt with minor clay, roots, trace of fine sand and fine to | \ \               | Grout (0'-1.5')             |  |  |  |
|                                |                 | 21/22                                            | ļ        | <u> </u>     | medium gravel, dry. (SM)                                                   |                   |                             |  |  |  |
|                                |                 | ļ                                                | ļ        | <del> </del> |                                                                            |                   | 011 D) (O Disess            |  |  |  |
| 2-4                            |                 | 22/25                                            | 2        | NA           | (2'-4') Fine to course gravel. Very little to no recovery in spoon.        |                   | 2" PVC Riser                |  |  |  |
| 2-4                            | <del> </del>    | 23/28                                            |          | TAT          | (2-4) This to course graver. Very fittle to no recovery in spoon.          |                   |                             |  |  |  |
|                                |                 |                                                  |          |              |                                                                            | ــه               | Bentonite Pellets (1.5'-3') |  |  |  |
|                                |                 |                                                  |          |              |                                                                            | <b></b>           | Filtered sand               |  |  |  |
|                                |                 |                                                  |          |              |                                                                            |                   | (#00N) pack - 3'-3.5'       |  |  |  |
| 4-6                            |                 | 23/21                                            | 80       | NA NA        | (4'-6') Grey, silt with trace clay, fine to medium gravel, trace of fine   |                   | Filtered sand (#0) pack     |  |  |  |
|                                |                 | 30/33                                            | ļ        | ├            | sand, dry. (SM)                                                            |                   | (3.5'-15')                  |  |  |  |
|                                |                 |                                                  |          | <del> </del> |                                                                            |                   |                             |  |  |  |
|                                |                 | <del>                                     </del> |          |              |                                                                            |                   | 0.010 " Slot, Sch 40 PVC    |  |  |  |
| 6-8                            |                 | 50/.3                                            | NA       | NA           | (6'-6.3') No recovery.                                                     |                   | Screen (4'-14')             |  |  |  |
|                                |                 |                                                  |          |              | Note: Refusal encountered at 6.3' bgs. Drilled to 8' bgs. with HSAs.       |                   |                             |  |  |  |
|                                |                 |                                                  |          | ļ            | Course gravel of black shale in tip of spoon.                              |                   |                             |  |  |  |
|                                |                 |                                                  | ļ        | ├            |                                                                            |                   |                             |  |  |  |
| 8-10                           | <b></b>         | 30/                                              | 20       | NA           | (8'-8.8') Brown to Grey, silt with clay and interbedded shale, dry.        |                   |                             |  |  |  |
| 0-10                           |                 | 50/.3                                            | -20      | 1111         | (SM/SC (Till))                                                             |                   |                             |  |  |  |
|                                |                 |                                                  |          |              | Note: Refusal encountered at 8.8' bgs. Drilled to 10' bgs. with HSAs.      |                   |                             |  |  |  |
|                                |                 |                                                  |          |              | ,                                                                          |                   |                             |  |  |  |
| 10.10                          |                 | 251                                              | 40-      |              |                                                                            |                   |                             |  |  |  |
| 10-12                          |                 | 35/<br>50/.3                                     | 40       | NA           | (10'-10.8') Same as above. (SM/SC (Till))                                  |                   |                             |  |  |  |
|                                |                 | 307.3                                            | <b></b>  | <del> </del> | Note: Refusal encountered at 10.8' bgs. Drilled to 12' bgs. with HSAs.     |                   |                             |  |  |  |
|                                |                 |                                                  |          |              |                                                                            |                   |                             |  |  |  |
|                                |                 |                                                  |          |              |                                                                            |                   |                             |  |  |  |
| 12-14                          | 122B-           | 38/                                              | 50       | NA           | (12'-12.8') Brown to Grey, silt with clay and interbedded shale, dry.      |                   |                             |  |  |  |
|                                | 1042            | 50/.3                                            |          | <b> </b>     | (SM/SC (Till))                                                             |                   |                             |  |  |  |
|                                |                 |                                                  |          | <del></del>  | Note: Refusal encountered at 12.8' bgs. Drilled to 14' bgs. with HSAs.     | ļ <u> </u>        |                             |  |  |  |
|                                |                 | <b></b>                                          |          | <del> </del> |                                                                            |                   | 14'                         |  |  |  |
| 14-16                          |                 | 50/.1                                            | 50       | NA           | (14'-14.1') No recovery.                                                   |                   | Sch. 40 PVC Sump            |  |  |  |
|                                |                 |                                                  |          |              | Note: Refusal encountered at 14.1' bgs. Tip of spoon wet. Attempted to     |                   | 14.5' 14'-14.5'             |  |  |  |
|                                |                 |                                                  |          |              | drill to 20' bgs., but encountered auger refusal at 15' bgs.               |                   | ŀ                           |  |  |  |
|                                | <u> </u>        |                                                  |          | <u> </u>     | Terminated soil boring at 15' bgs.                                         |                   | 15'                         |  |  |  |
| 16-18                          |                 |                                                  |          |              |                                                                            |                   |                             |  |  |  |
|                                | <b></b>         | <b> </b>                                         |          | <b> </b> -   |                                                                            |                   |                             |  |  |  |
|                                |                 | <u></u>                                          |          |              | COMMENTS:                                                                  |                   | <u> </u>                    |  |  |  |
|                                | SAMPLIN         | G METHO                                          | OD       |              | Collected soil sample 122B-1042 for total lead analysis.                   |                   | ē.                          |  |  |  |
|                                | SS = SPLIT SPOO | ON                                               |          |              | 6-inch PVC sump installed at bottom of well screen.                        |                   |                             |  |  |  |
| A - AUGER CUTTINGS             |                 |                                                  |          |              | 2-inch well installed.                                                     |                   |                             |  |  |  |
| 1                              | C = CORED       |                                                  |          |              |                                                                            |                   |                             |  |  |  |

# OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

PROTECTIVE RISER COMPLETION

|                                | TROI         | ECTIVE     | MDER C      | JOMPLET                | .ION       | ·          |              |
|--------------------------------|--------------|------------|-------------|------------------------|------------|------------|--------------|
| PARSONS                        |              |            | 4 COE       |                        |            | WELL#:     | 3            |
| 1 <u>4</u> _                   | a Kony Dg    | 201        | _ ]         | Pl                     | ROJECT NO: | 74/40      | 1.03/00      |
| LOCATION: Romaln               | 5 NY         |            | _           | . I                    | NSPECTOR:  | EJA        | shta         |
|                                |              |            |             | CH                     | ECKED BY:  | EOM        | Ashta        |
| DRILLING CONTRACTOR:           | Northster Or | Vling In   | <u> </u>    | P                      | OW DEPTH:  | 14.5       |              |
| DRILLER:                       | Scott Bre    | eds        |             | INSTALLATION           | STARTED:   | . 7110     | 102          |
| DRILLING COMPLETED:            | 7/10/02      | ·····      | _ INST      | TALLATION CO           | OMPLETED:  |            | 10/02        |
| BORING DEPTH:                  | 15           |            |             | FACE COMPLET           |            | 7/12/      | 102          |
| DRILLING METHOD(S):            | Hellow sten  | Auger      | COMPLET     | ION CONTRAC            | TOR/CREW:  | Nathre     | a hilling    |
| BORING DIAMETER(S):            | F. 25        | V          |             | ROCK CONFIRM           |            |            |              |
| ASSOCIATED SWMU/AOC:           | SEAN         | -1228      | -           | ED GROUND E            | -          |            | PZ'          |
| PROTECTIVE SURFACE CAS         | ING:         | ,          |             |                        |            |            |              |
|                                | DIAMETER:    | 4"         | LENGTH:     | 3.5'                   | _          | TOR:       | Hal          |
| riser:<br>toc: <u>627. 9</u> 4 | TYPE: L      | Lyo pre    | DIAMETER:   | 2"                     | LENGTH:    | 6.12       |              |
| SCREEN:                        | <del></del>  |            |             |                        |            |            | SLOT         |
| TSC: <u>621.82</u>             | TYPE: _£     | Lyo, puc   | DIAMETER:   | 2"                     | LENGTH:    | 10         | SIZE: 10-Slo |
| POINT OF WELL: (SILT SUMP)     |              | ,          |             |                        |            |            |              |
| YPE:                           | BSC: 6       | 11.82      | POW:        | 611.32                 |            |            |              |
| GROUT:                         |              |            |             |                        |            |            | 100          |
| TG:                            | 625.52       | TYPE:      | Come A/Benj | LENGTH:                |            | 1.5        |              |
| SEAL: TBS:                     | 624.32'      |            | fellets     | LENGTH:                |            | 15'        |              |
| SAND PACK: TSP:                | 622.82.      | ТҮРЕ:      | man & 4 con | C3-3,5')<br>S')LENGTH: | _          | 12'        | ***          |
| SURFACE COLLAR:                |              |            |             |                        |            |            |              |
| TYPE: (owereto                 | RADIUS:      | 2 x2       | THICK       | NESS CENTER:           | 6"         | THICKNES   | SS EDGE: 6"  |
| CENTRALIZER DEPTHS             |              |            |             |                        |            |            |              |
| DEPTH 1: M                     | DEPTH 2:     | NA_        | DEPTH 3:    | MA                     | -          | DEPTH 4:   | r4           |
| COMMENTS:                      |              |            |             |                        |            |            |              |
|                                | Sel Bar      | ry Ly      | fer         | in-dep                 | th of      | Lails      |              |
|                                | * AI         | L DEPTH ME | ASUREMENTS  | REFERENCED             | TO GROU    | ND SURFACE |              |

## APPENDIX B NOTICE OF INTENT TO PROCEED



100 High Street, 4th Floor • Boston, Massachusetts 02110 • (617) 946-9400 • Fax (617) 946-9777 • www.parsons.com

August 06, 2010

Mr. Julio Vazquez
U.S. Environmental Protection Agency, Region II
Superfund Federal Facilities Section
290 Broadway, 18th Floor
New York, NY 10007-1866

Mr. Kuldeep K. Gupta, P.E.
New York State Department of Environmental Conservation (NYSDEC)
Division of Environmental Remediation
Remedial Bureau A, Section C
625 Broadway
Albany, NY 12233-7015

Mr. Mark Sergott
Bureau of Environmental Exposure Investigation, Room 300
New York State Department of Health
547 River Street, Flanigan Square
Troy, NY 12180

SUBJECT:

Draft Well Decommissioning Plan for 18 SWMUs, Seneca Army Depot Activity, Seneca Army Depot Activity, Seneca County, New York; EPA Site ID# NY0213820830 and NY Site ID# 8-50-006

Dear Mr. Vazquez/Mr. Gupta/Mr. Sergott:

Parsons Infrastructure & Technology Group Inc. (Parsons) is pleased to submit the Draft Well Decommissioning Plan for 18 SWMUs (SEADs 4, 5, Ash Landfill, 11, 12, 24, 25, 26, 27, 48, 59, 63, 67, 70, 71, 119B, 121C, and 122B) at the Seneca Army Depot Activity in Seneca County, New York (EPA Site ID# NY0213820830 and NY Site ID# 8-50-006). This work plan is essentially equivalent to the one that has been previously been approved for the decommissioning of wells at SEAD-13 at the Depot.

Parsons anticipates that we will initiate the decommissioning activities at the identified sites shortly after Labor Day once we confirm the availability of the driller and field personnel so that we can complete field activities associated during the summer and fall 2010.

Should you have any questions, please do not hesitate to call me at (617) 449-1565 to discuss them.

Sincerely,

Jeffrey W. Adams Project Manager

**Enclosures** 

cc: M. Heaney, TechLaw

S. Absolom, SEDA

R. Battaglia, USACE, NY

J. Nohrstedt, USACE, Huntsville

K. Hoddinott, USACHPPM





100 High Street 4th Floor • Boston, Massachusetts 02110 • (617) 946-9400 • Fax (617) 946-9777 • www.parsons.com

August 06, 2010

Mr. John Nohrstedt U.S. Army Corps of Engineers Engineering and Support Center, Huntsville Attn: CEHNC-FS-IS 4820 University Square Huntsville, Alabama 35816-1822

**SUBJECT:** 

Draft Well Decommissioning Plan for 18 SWMUs, Seneca Army Depot Activity, Seneca County, New York; Contract W912DY-08-D-0003, Delivery Order 0008

Dear Mr. Nohrstedt:

Parsons Infrastructure & Technology Group Inc. (Parsons) is pleased to submit the Draft Well Decommissioning Plan for 18 SWMUs (SEADs 4, 5, Ash Landfill, 11, 12, 24, 25, 26, 27, 48, 59, 63, 67, 70, 71, 119B, 121C, and 122B) at the Seneca Army Depot Activity in Seneca County, New York. This work plan is essentially equivalent to the one that has been previously been approved for the decommissioning of wells at SEAD-13 at the Depot. This work was performed in accordance with the Scope of Work for Delivery Order 0008 under Contract W912DY-08-D-0003.

Parsons anticipates that we will initiate the decommissioning activities at the identified sites shortly after Labor Day once we confirm the availability of the driller and field personnel so that we can complete field activities associated during the summer and fall 2010.

Parsons appreciates the opportunity to provide you with the Final Well Abandonment Plan for this work. Should you have any questions, please do not hesitate to call me at (617) 449-1565 to discuss them.

Sincerely.

Jeffrey W. Adams Project Manager

Enclosures

cc: S. Absolom, SEDA

K. Hoddinott, USACHPPM R. Battaglia, USACE, NY

## APPENDIX C WELL DECOMMISSION RECORD

# Table 2-4 Well Decommissioning Record Well Abandonment Plan Seneca Army Depot Activity

| WELL DECOMMISSIONING RE                  | ECORD              |                     | •                                          |  |  |  |  |  |
|------------------------------------------|--------------------|---------------------|--------------------------------------------|--|--|--|--|--|
| Site Name: Seneca Army Dec               | ot                 | Well ID:            | MW-28                                      |  |  |  |  |  |
|                                          | NAFILL             | Driller:            | : David LIDF                               |  |  |  |  |  |
| Drilling Company: G-Cologic North        |                    | -                   | Scott Dillman                              |  |  |  |  |  |
|                                          |                    | Date: 9             | , , , , , , , , , , , , , , , , , , , ,    |  |  |  |  |  |
| DECOMMISSIONING DA                       | A T A              | 24.0.               |                                            |  |  |  |  |  |
| (Fill in all that apply)                 | AIA                | Depth               | WELL SCHEMATIC*                            |  |  |  |  |  |
| (I in in an that apply)                  |                    | (feet)              | 2.25 10.3 A                                |  |  |  |  |  |
| OVERDRILLING                             |                    | (1001)              | Stick up Top TO TO                         |  |  |  |  |  |
| Interval Drilled                         |                    |                     | - Sail                                     |  |  |  |  |  |
| Drilling Method(s)                       |                    |                     |                                            |  |  |  |  |  |
| Borehole Dia. (in.)                      |                    |                     | <u> </u>                                   |  |  |  |  |  |
| Temporary Casing Installed? (y/n)        |                    |                     |                                            |  |  |  |  |  |
| Depth temporary casing installed         |                    | 5                   | PULLED                                     |  |  |  |  |  |
| Casing type/dia. (in.)                   |                    |                     | PUC - Grout                                |  |  |  |  |  |
| Method of installing                     |                    |                     | - PUC Grow                                 |  |  |  |  |  |
|                                          |                    |                     | - WELL ET                                  |  |  |  |  |  |
| CASING PULLING                           |                    |                     | - Do Tay                                   |  |  |  |  |  |
| Method employed                          | Grout, Pull, Grout | 10                  |                                            |  |  |  |  |  |
| Casing retrieved (feet)                  | 10,5 Ft            |                     |                                            |  |  |  |  |  |
| Casing type/dia. (in.)                   | 2" PVC             |                     | - Well                                     |  |  |  |  |  |
| GAGE PERPENDE ARTOLO                     |                    |                     |                                            |  |  |  |  |  |
| CASE PERFORATING                         |                    | 15                  |                                            |  |  |  |  |  |
| Equipment used                           |                    | 15                  |                                            |  |  |  |  |  |
| Number of perforations/foot              |                    |                     |                                            |  |  |  |  |  |
| Size of perforations                     |                    |                     | /                                          |  |  |  |  |  |
| Interval perforated                      |                    |                     | <b>—</b>   //                              |  |  |  |  |  |
| GROUTING                                 |                    | 20                  | <u> </u>                                   |  |  |  |  |  |
| Interval grouted (FBLS)                  | 1-8.3              |                     |                                            |  |  |  |  |  |
| # of batches prepared                    | 1 0.3              |                     | <b>-</b>     / /                           |  |  |  |  |  |
| For each batch record:                   |                    |                     | <u> </u>                                   |  |  |  |  |  |
| Quantity of water used (gal.)            | 18                 |                     | -                                          |  |  |  |  |  |
| Quantity of cement used (lbs.)           | 2-bags             | 25                  | - //                                       |  |  |  |  |  |
| Cement type                              | Type I Purtland    |                     | <b>-</b>                                   |  |  |  |  |  |
| Quantity of bentonite used (lbs.)        | 10 come of s       |                     | NOT                                        |  |  |  |  |  |
| Quantity of calcium chloride used (lbs.) | 112 1001 02 3      |                     |                                            |  |  |  |  |  |
| Volume of grout prepared (gal.)          |                    |                     | DRILLED                                    |  |  |  |  |  |
| Volume of grout used (gal.)              | 8 and              | 30                  | <b>-</b> 1/                                |  |  |  |  |  |
|                                          |                    | ***                 | السلام السلام                              |  |  |  |  |  |
|                                          | 00 ft from TOC     | * Sketch in all rel | evant decommissioning data, including:     |  |  |  |  |  |
|                                          | sing with grout.   | interval overdrille | ed, interval grouted, casing left in hole, |  |  |  |  |  |
|                                          | ning borehole.     | well stickup, etc.  |                                            |  |  |  |  |  |
| Added soil on top.                       |                    |                     |                                            |  |  |  |  |  |

Geologic North Star

Drilling Contractor

## Table 2-4 Well Decommissioning Record Well Abandonment Plan Seneca Army Depot Activity

| WELL DECOMMISSIONING                     | RECORD                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Site Name: Seneca Army A                 | eact                                                                                                             | Well ID:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MW-30                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Site Location: SEAD ASH                  | LANDFILL                                                                                                         | Driller:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          | - Aa                | vid Lion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  |
| Drilling Company: Geologic North         |                                                                                                                  | The second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the second liverage and the se | Inspector: Scott Dillman |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| 3 7 3                                    | and the second second second second second second second second second second second second second second second | Date: 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 120/10                   | 7776677             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| DECOMMISSIONING                          | DATA                                                                                                             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | WELL SCHE                | AATIC*              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| (Fill in all that app                    |                                                                                                                  | Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | WELL SCHE                | MATIC*              | in c                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |
| (1 m m an mac app                        | ן ניי                                                                                                            | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ~3 ×                     | 944                 | 100分射                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |
| OVERDRILLING                             |                                                                                                                  | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 5t                       | moved moved         | TOP TO TO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |
| Interval Drilled                         |                                                                                                                  | ***************************************                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1                        | MOVER               | Soil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |
| Drilling Method(s)                       |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | 1                   | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |
| Borehole Dia. (in.)                      |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     | ľ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |
| Temporary Casing Installed? (y/n)        |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Depth temporary casing installed         |                                                                                                                  | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.1                      | LED                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Casing type/dia. (in.)                   |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 70                       |                     | Grout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |
| Method of installing                     |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|                                          |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | me we                    | ELL =               | potton                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |
| CASING PULLING                           |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Method employed                          | Grout, Pull, Grait                                                                                               | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          | V                   | Well                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |
| Casing retrieved (feet)                  | 10.5 FF                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | . /                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Casing type/dia. (in.)                   | 2"PVC                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | V                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| CASE PERFORATING                         |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | 1                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Equipment used                           |                                                                                                                  | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Number of perforations/foot              |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -                        | . /                 | NOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |
| Size of perforations                     |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     | 1 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |
| Interval perforated                      |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     | DRILLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |  |
| interval periorated                      |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | $V_{a}$             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| GROUTING                                 |                                                                                                                  | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Interval grouted (FBLS)                  | 1-6.6                                                                                                            | - Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual  |                          | 1/                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| # of batches prepared                    |                                                                                                                  | TO A PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE P |                          | · /                 | de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la constant de la  |  |  |  |
| For each batch record:                   |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     | De la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de |  |  |  |
| Quantity of water used (gal.)            | 18                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | V                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Quantity of cement used (lbs.)           | 2 5ag 5                                                                                                          | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          | ,                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Cement type                              | Type Y Portland                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Quantity of bentonite used (lbs.)        | 18 pounds                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | V                   | NOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |
| Quantity of calcium chloride used (lbs.) |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | -1/                 | DRILLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |  |
| Volume of grout prepared (gal.)          |                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          | V ,                 | 4311246425                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |
| Volume of grout used (gal.)              | 6 gal                                                                                                            | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| COMMENTS: A a city is                    | 2026 610 = -1                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |
| COMMENTS: Depth to water =               |                                                                                                                  | * Sketch in all rel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | evant decommissio        | oning data, includ  | ling:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |
|                                          | casing with grout.                                                                                               | unterval overdrille<br>well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ed, interval grouted,    | , casing left in ho | ile,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |
| 4 4 4 4                                  | raining borehole.                                                                                                | Suckup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
| Added soil on tops                       | -                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |

Geologic North Star Drilling Contractor

Department Representative

### WELL DECOMMISSIONING RECORD Seneca MW-31 Site Name: ACMY Well ID: SEA D Site Location: Driller: nowid Lion Drilling Company: G-Cologic Dillman Inspector: Date: 120/10 **DECOMMISSIONING DATA** WELL SCHEMATIC\* (Fill in all that apply) Depth (feet) stick up **OVERDRILLING** Interval Drilled Soil Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Grout Casing type/dia. (in.) PUC Method of installing WELL CASING PULLING Method employed 10 BOTTUM Casing retrieved (feet) OF Casing type/dia. (in.) Well CASE PERFORATING Equipment used 15 Number of perforations/foot Size of perforations Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type pet Portla Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLEL Volume of grout prepared (gal.) Volume of grout used (gal.) 30 10 gal Depth to water \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

Drilling Contractor

### WELL DECOMMISSIONING RECORD Seneca Well ID: Site Name: SEA D Site Location: Driller: G-POLOGIC Inspector: Scott Dillman Drilling Company: Date: 20/10 DECOMMISSIONING DATA WELL SCHEMATIC\* (Fill in all that apply) Depth 2.6 1 (feet) stick up Rumoved **OVERDRILLING** Interval Drilled Soil Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Grout Casing type/dia. (in.) PUC Method of installing WELL CASING PULLING 10 Method employed well Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING 15 Equipment used Number of perforations/foot Size of perforations Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) Volume of grout used (gal.) 30 COMMENTS: Depth to water = ft from TOC \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc. Added

Geologic North Star

Drilling Contractor

### Table 2-4 Well Decommissioning Record

Well Abandonment Plan Seneca Army Depot Activity

| WELL DECOMMISSIONING RECORD                                          |                                                                                                                        |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Site Name: Seneca Army Depot                                         | Well ID: MW-34                                                                                                         |
| Site Location: SEAD - ASh Land Fill                                  | Driller: David Livy                                                                                                    |
| Drilling Company: Geologic North Star                                | Inspector: Scott Dillman                                                                                               |
|                                                                      | Date: 9/ /10                                                                                                           |
| DECOMMISSIONING DATA                                                 | WELL SCHEMATIC*                                                                                                        |
| (Fill in all that apply)                                             | Depth 1914 18,1                                                                                                        |
|                                                                      | (fact)                                                                                                                 |
| OVERDRILLING                                                         | O SHICK UP TOP TOTI                                                                                                    |
| Interval Drilled                                                     | Soil                                                                                                                   |
| Drilling Method(s)                                                   |                                                                                                                        |
| Borehole Dia. (in.)                                                  |                                                                                                                        |
| Temporary Casing Installed? (y/n) Depth temporary casing installed   | 5 - 1.460                                                                                                              |
| Casing type/dia. (in.)                                               | 5 PULLED Growt                                                                                                         |
| Method of installing                                                 | - PVC Grou                                                                                                             |
| <u> </u>                                                             | WELL ST                                                                                                                |
| CASING PULLING                                                       |                                                                                                                        |
| Method employed Grout, Poll, Grout                                   | 10                                                                                                                     |
| Casing retrieved (feet)                                              |                                                                                                                        |
| Casing type/dia. (in.)                                               |                                                                                                                        |
| CASE PERFORATING                                                     |                                                                                                                        |
| Equipment used                                                       | 15                                                                                                                     |
| Number of perforations/foot                                          |                                                                                                                        |
| Size of perforations                                                 | Botton                                                                                                                 |
| Interval perforated                                                  | 1                                                                                                                      |
|                                                                      | 20 = / well                                                                                                            |
| GROUTING                                                             |                                                                                                                        |
| Interval grouted (FBLS) $1-16.24$                                    |                                                                                                                        |
| # of batches prepared For each batch record:                         |                                                                                                                        |
| Quantity of water used (gal.)                                        |                                                                                                                        |
| Quantity of water used (gar.)  Quantity of cement used (lbs.)  26aq5 | 25   /                                                                                                                 |
| Cement type Type Toutland                                            |                                                                                                                        |
| Quantity of bentonite used (lbs.)                                    | / Not                                                                                                                  |
| Quantity of calcium chloride used (lbs.)                             | DRILLE                                                                                                                 |
| Volume of grout prepared (gal.)                                      |                                                                                                                        |
| Volume of grout used (gal.)                                          | ] 30 ]                                                                                                                 |
| COMMENTS: Depth to water = 7,58 ft from TOC                          | 7                                                                                                                      |
| Knocked out end cap. Loaded casing with grout.                       | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, |
| Priled casing. browted remaining borehole.                           | well stickup, etc.                                                                                                     |
| Added soil on top.                                                   | 1                                                                                                                      |

Geologic North Star
Drilling Contractor

| WELL DECOMMISSIONING RECORD                                                           | , 5                                                                                                                                             |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: SENECH ARMY NEPST.                                                         | Well ID: MW351                                                                                                                                  |
| Site Location: SEAN - Ash Land Fill                                                   | Driller: David Liens                                                                                                                            |
| Drilling Company: Gedoaic North star                                                  | Inspector: Seatt Nillman                                                                                                                        |
| Drining Company. Bedaute 1001 12 31 20                                                | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                                                                                                         |
| DROOM GERTON MAD DATE                                                                 |                                                                                                                                                 |
| DECOMMISSIONING DATA                                                                  | WELL SCHEMATIC*                                                                                                                                 |
| (Fill in all that apply)                                                              | Depth 3 Sticker                                                                                                                                 |
| OVERDRILLING                                                                          | (lect) D Removed for 10                                                                                                                         |
| Interval Drilled                                                                      | 10                                                                                                                                              |
| Drilling Method(s)                                                                    | - 1 AN M26.6                                                                                                                                    |
| Borehole Dia. (in.)                                                                   | 500                                                                                                                                             |
| Temporary Casing Installed? (y/n)                                                     | 1000                                                                                                                                            |
| Depth temporary casing installed                                                      | 10                                                                                                                                              |
| Casing type/dia. (in.)                                                                | - 10 - Cos' od Grov                                                                                                                             |
| Method of installing                                                                  | The Man Land                                                                                                                                    |
| CASING PULLING                                                                        | 1 1 1 /                                                                                                                                         |
| Method employed Grout in Place                                                        | 20 - '                                                                                                                                          |
| Casing retrieved (feet)                                                               |                                                                                                                                                 |
| Casing type/dia. (in.)                                                                | 545                                                                                                                                             |
| CASE PERFORATING                                                                      | 20 = 20                                                                                                                                         |
| Equipment used                                                                        | 30                                                                                                                                              |
| Number of perforations/foot                                                           | - place                                                                                                                                         |
| Size of perforations                                                                  | 1/1/                                                                                                                                            |
| Interval perforated                                                                   |                                                                                                                                                 |
| GROUTING                                                                              | 40 = 600                                                                                                                                        |
| Interval grouted (FBLS)                                                               |                                                                                                                                                 |
| # of batches prepared                                                                 |                                                                                                                                                 |
| For each batch record:                                                                |                                                                                                                                                 |
| Quantity of water used (gal.)                                                         | 50 -                                                                                                                                            |
| Quantity of cement used (lbs.)                                                        |                                                                                                                                                 |
| Cement type                                                                           |                                                                                                                                                 |
| Quantity of bentonite used (lbs.)                                                     | _                                                                                                                                               |
| Quantity of carciain chloride used (10s.)                                             |                                                                                                                                                 |
| Volume of grout prepared (gal.)                                                       | 60 - 56.3                                                                                                                                       |
| Volume of grout used (gal.)                                                           |                                                                                                                                                 |
| COMMENTS: Appth to water = 4.29 St. fonto<br>Knocked but end glug: Loaded casing with | * Sketch in all relevant decommissioning data, including:<br>interval overdrilled, interval grouted, casing left in hole,<br>well stickup, etc. |
| grante. To 1 and aft grant. Filed half with                                           | **************************************                                                                                                          |
| Geologic North Star soil.                                                             |                                                                                                                                                 |
|                                                                                       | Department Personalistics                                                                                                                       |
| Drining Contractor                                                                    | Department Representative                                                                                                                       |

| WELL DECOMMISSIONING RECORD                      | 3                                                                                                                   |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|                                                  | 3                                                                                                                   |
| Site Name: SENECH ARMY NEPOT                     | Well ID: MW36                                                                                                       |
| Site Location: SEAD - ASH Land Fill              | Driller: Devid Lions                                                                                                |
| Drilling Company: Gedogic North star             | Inspector: Scatt Sillman                                                                                            |
| 3                                                | Date: 1/2/s/2011                                                                                                    |
| DECOMMISSIONING DATA                             | 111111111111111111111111111111111111111                                                                             |
| (Fill in all that apply)                         | Depth 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                                                                         |
| (1 III III all that apply)                       | (fact) STICE   m 0 Th                                                                                               |
| OVERDRILLING                                     | (leet) D Removed TD                                                                                                 |
| Interval Drilled                                 |                                                                                                                     |
| Drilling Method(s)                               | - 1 16.6                                                                                                            |
| Borehole Dia. (in.)                              |                                                                                                                     |
| Temporary Casing Installed? (y/n)                |                                                                                                                     |
| Depth temporary casing installed                 | 5 - 1                                                                                                               |
| Casing type/dia. (in.)                           | 5 Pulsed Growt                                                                                                      |
| Method of installing                             |                                                                                                                     |
| CASING PULLING                                   | - P3.4                                                                                                              |
|                                                  | - 10 - (what)                                                                                                       |
| Casing retrieved (feet)  Casing retrieved (feet) |                                                                                                                     |
| Casing type/dia. (in.)                           | - v                                                                                                                 |
| 377                                              |                                                                                                                     |
| CASE PERFORATING                                 |                                                                                                                     |
| Equipment used                                   |                                                                                                                     |
| Number of perforations/foot                      |                                                                                                                     |
| Size of perforations                             | 1                                                                                                                   |
| Interval perforated                              | 15.8                                                                                                                |
| GROUTING                                         | 20 -                                                                                                                |
| Interval grouted (FBLS) 0 -15.8 F4               |                                                                                                                     |
| # of batches prepared                            | T NOT                                                                                                               |
| For each batch record:                           |                                                                                                                     |
| Quantity of water used (gal.)                    | Desuis                                                                                                              |
| Quantity of cement used (lbs.)                   |                                                                                                                     |
| Cement type Type   Part and                      |                                                                                                                     |
| Quantity of bentonite used (lbs.)                |                                                                                                                     |
| Quantity of calcium chloride used (lbs.)         |                                                                                                                     |
| Volume of grout prepared (gal.)                  |                                                                                                                     |
| Volume of grout used (gal.)                      |                                                                                                                     |
| COMMENTS: Aroth to water = 3.45 At. fonth        |                                                                                                                     |
| V I A I I I I I I I I I I I I I I I I I          | Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, |
| grants fulled casing. Toffed off grant           | well stickup, etc.                                                                                                  |
| to new surface.                                  |                                                                                                                     |
| JBM                                              |                                                                                                                     |

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING                     | RECORD             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     |                      |
|------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------|----------------------|
| Site Name: Seneca Army A                 | epot               | Well ID:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MW-3                 | 7                   |                      |
| Site Location: SEAD ASH                  | CHNOFILL           | Driller:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |                     | avid Lion            |
| Drilling Company: G-Cologic Nort         |                    | The second section is a second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second | Scott Di             |                     |                      |
|                                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 121/10               | TIPPCOCF            |                      |
| DECOMMISSIONING                          | DATA               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | WELL SCHE            | TA A TTOS           |                      |
| (Fill in all that app                    |                    | Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | WELL SCHE            | MATIC*              | 13.75                |
| (1 m m an mar app                        | ,,,,,              | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      | (1)3                | 1 2.77               |
| OVERDRILLING                             |                    | (1001)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ã.                   | tick up             | TOP TO TA            |
| Interval Drilled                         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      | CHEVEN              | Soil                 |
| Drilling Method(s)                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      | 1                   | 7                    |
| Borehole Dia. (in.)                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     | Towns and the second |
| Temporary Casing Installed? (y/n)        |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     |                      |
| Depth temporary casing installed         |                    | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.7                  | LED                 |                      |
| Casing type/dia. (in.)                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      | -                   | Grout                |
| Method of installing                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PV                   | ELL E               | 10.                  |
| GAGNIG NAVA NAG                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | W                    | 200                 |                      |
| CASING PULLING                           |                    | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                     |                      |
| Method employed                          | Grout, Pull, Grait | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                     |                      |
| Casing retrieved (feet)                  | 13.75-24           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      | ,                   |                      |
| Casing type/dia. (in.)                   | 2"PVC              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     | BOTTOM               |
| CASE PERFORATING                         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     | 1 st                 |
| Equipment used                           |                    | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                     | Well                 |
| Number of perforations/foot              |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ultermenten          |                     |                      |
| Size of perforations                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     |                      |
| Interval perforated                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     |                      |
|                                          |                    | _                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |                     | · ·                  |
| GROUTING                                 | -                  | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -                    |                     |                      |
| Interval grouted (FBLS)                  | 1-13.75            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      | Y ,                 |                      |
| # of batches prepared                    | 1                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | _                    |                     |                      |
| For each batch record:                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      | Y.                  |                      |
| Quantity of water used (gal.)            | 18                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -                    |                     |                      |
| Quantity of cement used (lbs.)           | 26095              | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                     |                      |
| Cement type                              | Type I Portland    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     |                      |
| Quantity of bentonite used (lbs.)        | 16 pounds          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     | NOT                  |
| Quantity of calcium chloride used (lbs.) | ,                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     | DRILLED              |
| Volume of grout prepared (gal.)          |                    | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                     | 471 (2442)           |
| Volume of grout used (gal.)              | 13 gal             | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                     |                      |
| COMMENTS: Death to water =               | 130000             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     |                      |
|                                          | 6-30 Ft from TOC   | * Sketch in all rei                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | levant decommission  | oning data, includ  | ling:                |
|                                          | casing with grout. | unterval overdrille<br>well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ed, interval grouted | , casing left in ho | ole,                 |
| Added soil on top.                       | raining borehole.  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     |                      |
|                                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                     |                      |

Geologic North Star

Drilling Contractor

Table 2-4 Well Decommissioning Record Well Abandonment Plan Seneca Army Depot Activity

| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                              |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----|
| Give November 1 Age of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the las | Well ID: MW.38D                                              |     |
| Site Name: ASH Carollell Site Location: SEADG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                              |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Driller:                                                     |     |
| Drilling Company: Geolgic N.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Inspector:                                                   |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Date:                                                        |     |
| DECOMMISSIONING DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | WELL SCHEMATIC*                                              |     |
| (Fill in all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Depth                                                        |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (feet) \$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \                | 3.  |
| OVERDRILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                              |     |
| Interval Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                              |     |
| Drilling Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                              |     |
| Borehole Dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                              |     |
| Temporary Casing Installed? (y/n)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                              |     |
| Depth temporary casing installed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                              |     |
| Casing type/dia. (in.) Method of installing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                              |     |
| Method of histaring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                              |     |
| CASING PULLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                              |     |
| Method employed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10 — 1                                                       |     |
| Casing retrieved (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                              |     |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                              |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                              |     |
| CASE PERFORATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 15                                                           | 7-7 |
| Equipment used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                              | 1 ( |
| Number of perforations/foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                              |     |
| Size of perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                              |     |
| Interval perforated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                              |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                              |     |
| GROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20                                                           |     |
| Interval grouted (FBLS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                              |     |
| # of batches prepared                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                              |     |
| For each batch record:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                              |     |
| Quantity of water used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 15  \                                                        |     |
| Quantity of cement used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                              |     |
| Cement type Quantity of bentonite used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                              |     |
| Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | _ 1 / /                                                      |     |
| Volume of grout prepared (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | /                                                            |     |
| Volume of grout used (gal.)  30 spley                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 30 - 129 7                                                   |     |
| Johnson great about (gain)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                              |     |
| COMMENTS:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | * Sketch in all relevant decommissioning data, including:    |     |
| Knock out borrows. (nout tremake, soll for                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | interval overdrilled, interval grouted, casing left in hole, |     |
| DUC & CU-Sky Renove Riser, TOP OF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | well stickup, etc.                                           |     |
| gut                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                              |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                              |     |

Drilling Contractor

3 Aluminum bollevels
Groot in place.
I Protective casing.

Department Representative

29.7 TD: 32.4 Grah: 29.7

| WELL DECOMMISSIONING RECORD                   | •                                                                               |
|-----------------------------------------------|---------------------------------------------------------------------------------|
| Site Name: Seneca Army Depot                  | Well ID: MW41D                                                                  |
| Site Location: SEAD JASH LANDFILL             | Driller: Scott Breeds                                                           |
| Drilling Company: Geologic North Star         | Inspector: Scott Dillman                                                        |
|                                               | Date: 9/17/10                                                                   |
| DECOMMISSIONING DATA                          | WELL SCHEMATIC*                                                                 |
| (Fill in all that apply)                      | Dod / I-                                                                        |
| C - control since or control   L Lory /       | (foot) 4.) '>                                                                   |
| OVERDRILLING                                  | Sticked TOP TO TD                                                               |
| Interval Drilled                              | -to tsoil                                                                       |
| Drilling Method(s)                            | Casing S                                                                        |
| Borehole Dia. (in.)                           | Removed                                                                         |
| Temporary Casing Installed? (y/n)             | to = 2-3 ft                                                                     |
| Depth temporary casing installed              | 10                                                                              |
| Casing type/dia. (in.)                        | - 6 casing casing                                                               |
| Method of installing                          | - 527 / Filler)                                                                 |
| CASING PULLING                                | belivik with                                                                    |
| Method employed Growt in place                | 20 - believe growt                                                              |
| Casing retrieved (feet)                       |                                                                                 |
| Casing type/dia. (in.)                        |                                                                                 |
|                                               |                                                                                 |
| CASE PERFORATING                              |                                                                                 |
| Equipment used                                | 30                                                                              |
| Number of perforations/foot                   |                                                                                 |
| Size of perforations                          |                                                                                 |
| Interval perforated                           | -                                                                               |
| CROUTRIC                                      | 40 -                                                                            |
| GROUTING                                      | 40                                                                              |
| Interval grouted (FBLS) # of batches prepared |                                                                                 |
| For each batch record:                        |                                                                                 |
| Quantity of water used (gal.)                 |                                                                                 |
| Quantity of cement used (lbs.)                | 50 Bottom                                                                       |
| Cement type Type I Partland                   |                                                                                 |
| Quantity of bentonite used (lbs.)             | - Well                                                                          |
| Quantity of calcium chloride used (lbs.)      | 1/100                                                                           |
| Volume of grout prepared (gal.)               | Latina Language                                                                 |
| Volume of grout used (gal.) 20 gal.           | 60 -                                                                            |
|                                               |                                                                                 |
| COMMENTS: Removed concrete and guard pipe.    | * Sketch in all relevant decommissioning data, including:                       |
| Loaded caring with growt. Dug alt around      | interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |
| well. Cut off casing. Topped off grant.       | non shokup, etc.                                                                |
| Buckfilled hole 0-2++ with soils              |                                                                                 |

bedogic North Star

Drilling Contractor

| WELL DECOMMISSIONING R                                        | ECORD             |                      |                                                 |
|---------------------------------------------------------------|-------------------|----------------------|-------------------------------------------------|
| Site Name & S. A. S. S. A. A. A. A.                           | <u> </u>          |                      | A (2 A                                          |
| Site Name: Seneca Army De.                                    | POT               | Well ID:             | MW421                                           |
| Site Location: ASW Lan                                        | dfill             | Driller: _<          | Scott Breeds                                    |
| Drilling Company: Geologic Nov                                | th star           | Inspector:           | Scott Dillman                                   |
| <i>y</i>                                                      |                   | Date: 9              | 116 110                                         |
| DECOMMISSIONING I                                             |                   | ,                    | WELL SCHEMATIC*                                 |
| (Fill in all that apply                                       | <sup>'</sup> )    | Depth                | 221 11-2                                        |
| OVED DDU A DAG                                                |                   | (feet)               | 2,2 47,3                                        |
| OVERDRILLING Interval Drilled                                 |                   |                      | Stick UP TOP TO TO                              |
| 1                                                             |                   |                      | 1 /5011                                         |
| Drilling Method(s) Borehole Dia. (in.)                        |                   |                      |                                                 |
| Temporary Casing Installed? (y/n)                             |                   |                      |                                                 |
| Depth temporary casing installed                              |                   | 10                   | - Casing                                        |
| Casing type/dia. (in.)                                        |                   | -10                  | Removed                                         |
| Method of installing                                          |                   |                      | <del>                                    </del> |
| 8                                                             |                   |                      | Casing Casing                                   |
| CASING PULLING                                                |                   |                      | - Lasing                                        |
| Method employed                                               | Groot in place    | 20                   | left in filled                                  |
| Casing retrieved (feet)                                       | 4.2 ft            |                      | hole both                                       |
| Casing type/dia. (in.)                                        | Z"PVC             |                      | grov!                                           |
| CASE PERFORATING                                              |                   |                      |                                                 |
| Equipment used                                                |                   | 30                   |                                                 |
| Number of perforations/foot                                   |                   |                      |                                                 |
| Size of perforations                                          |                   |                      |                                                 |
| Interval perforated                                           |                   |                      |                                                 |
|                                                               |                   |                      |                                                 |
| GROUTING                                                      |                   | 40                   |                                                 |
| Interval grouted (FBLS)                                       | +8 2-45           |                      |                                                 |
| # of batches prepared                                         | 36095 Butch       |                      | Bottom                                          |
| For each batch record:                                        | 10                |                      |                                                 |
| Quantity of water used (gal.)  Quantity of cement used (lbs.) | 18                | 50                   | _   / well                                      |
| Cement type                                                   | 2 5ag5            |                      | <b>→</b>   Y/I                                  |
| Quantity of bentonite used (lbs.)                             | Type I Portland   |                      | — // · -                                        |
| Quantity of calcium chloride used (lbs.)                      | 16 founds         |                      | Drilled                                         |
| Volume of grout prepared (gal.)                               |                   | £ -                  | - Drilled                                       |
| Volume of grout used (gal.)                                   | 20 gal            | 60                   | - $ $ $ $                                       |
|                                                               | <u> </u>          |                      |                                                 |
| COMMENTS: Trick to soil goord                                 | pipe. Guard pipe  | * Sketch in all rele | evant decommissioning data, including:          |
| broke above pad. They to                                      | ILL PUC WOLL      | interval overdrille  | ed, interval grouted, casing left in hole,      |
|                                                               | broke off. Excava | well stickup, etc.   |                                                 |
| around well to 2-3 ft, Gobut                                  | ed well in place  | <b>a</b>             |                                                 |

Brilling Contractor

| WELL DECOMMISSIONING RECORD                | Activity                                                  |
|--------------------------------------------|-----------------------------------------------------------|
| Site Name: Seneca Army Depot               | W. H. T.                                                  |
| site Location: SEAN                        | Well ID: MW43                                             |
| Orilling Company: G-Cologic North Star     | Driller: Scott Breeds                                     |
| Jerresian                                  | Inspector: Scott Dillman                                  |
| DECOM AGGIOVENIO                           | Date: 9/16/10                                             |
| DECOMMISSIONING DATA                       | WELL SCHEMATIC*                                           |
| (Fill in all that apply)                   | 1 Denth                                                   |
| VERDRILLING                                | (feet) 2.8 17.6                                           |
| nterval Drilled                            | O Stick up Top To                                         |
| rilling Method(s)                          | - Fishil                                                  |
| orehole Dia. (in.)                         | 1 1 3011                                                  |
| emporary Casing Installed? (y/n)           |                                                           |
| epth temporary casing installed            | 7                                                         |
| asing type/dia. (in.)                      | 5 PULLED                                                  |
| ethod of installing                        |                                                           |
|                                            | PUC A Grow                                                |
| ASING PULLING                              | WELL VALUE                                                |
| ethod employed                             |                                                           |
| sing retrieved (feet)                      | 10 ] 0+                                                   |
| sing type/dia. (in.)                       | Bottom                                                    |
| - 140                                      | = of well                                                 |
| ASE PERFORATING                            |                                                           |
| uipment used                               | 1 15                                                      |
| mber of perforations/foot                  |                                                           |
| e of perforations                          |                                                           |
| erval perforated                           |                                                           |
| OUTING                                     |                                                           |
| propi granted (PDI G)                      | 20 -                                                      |
| f batches prepared                         |                                                           |
| each batch record:                         |                                                           |
| ontity of water and I ( )                  |                                                           |
| intity of cement used (the )               |                                                           |
| Lant time                                  | 25 - //                                                   |
| ntity of hentonite used (the)              |                                                           |
| ntity of calcium chloride used (lbs.)      | Not                                                       |
| ame of grout prepared (gal.)               |                                                           |
| Ime of grout used (gol)                    | DRILLE                                                    |
| or grout used (gai.)                       | 30                                                        |
| MENTS: A                                   |                                                           |
| school out end cap, Loaded casing with a t | * Sketch in all relevant decommissioning data, including: |
| 100 60 6110                                | incival overaffied, interval grouted casing left in hole  |
| led casing. Grated remaining borehole.     | well stickup, etc.                                        |

Geologic North Star

| WELL DECOMMISSIONING R                           | ECORD                                 |                 | mw-4                                                    | 5.            |
|--------------------------------------------------|---------------------------------------|-----------------|---------------------------------------------------------|---------------|
| Site Name: Ash Landhul                           |                                       | Well ID:        | mw-45                                                   |               |
| Site Location: SEAD - 6                          |                                       | Driller:        | -                                                       |               |
| Drilling Company: Greath                         |                                       | Inspector:      | malliste                                                |               |
| Diffing Company.                                 |                                       | Date:           | 1000-4111-8-0                                           |               |
| DECOMMISSIONING I                                | DATA                                  | Bute.           | WELL SCHEMA                                             | TIC* End L    |
| (Fill in all that apply                          |                                       | Depth           | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,                 | 104H          |
| (1 III iii aii that appi)                        | , , , , , , , , , , , , , , , , , , , | (feet)          |                                                         | X/1 RAdle     |
| OVERDRILLING                                     |                                       |                 |                                                         | X 308466      |
| Interval Drilled                                 |                                       |                 |                                                         |               |
| Drilling Method(s)                               |                                       |                 |                                                         | M.            |
| Borehole Dia. (in.)                              |                                       |                 |                                                         |               |
| Temporary Casing Installed? (y/n)                |                                       | ,               |                                                         |               |
| Depth temporary casing installed                 |                                       |                 |                                                         |               |
| Casing type/dia. (in.)                           |                                       |                 |                                                         |               |
| Method of installing                             |                                       |                 |                                                         |               |
|                                                  |                                       |                 |                                                         |               |
| CASING PULLING                                   |                                       | 2               |                                                         |               |
| Method employed                                  | K2.                                   |                 |                                                         | X             |
| Casing retrieved (feet)                          | 8.461                                 |                 |                                                         |               |
| Casing type/dia. (in.)                           | PUC 2"                                |                 |                                                         |               |
| CACE DEDECD ATING                                |                                       |                 |                                                         | 5/1           |
| CASE PERFORATING Equipment used                  |                                       | 5               |                                                         | 5.4 h         |
|                                                  |                                       |                 | _                                                       | X G           |
| Number of perforations/foot Size of perforations |                                       |                 |                                                         | 1 Short       |
| Interval perforated                              |                                       |                 |                                                         | $\mathbb{K}$  |
| Interval perforated                              |                                       | 24              |                                                         |               |
| GROUTING                                         |                                       |                 |                                                         |               |
| Interval grouted (FBLS)                          | 5.45+                                 |                 |                                                         | $\mathcal{M}$ |
| # of batches prepared                            | 1                                     |                 |                                                         |               |
| For each batch record:                           |                                       | 2               |                                                         |               |
| Quantity of water used (gal.)                    | 18 schols                             |                 |                                                         | I X           |
| Quantity of cement used (lbs.)                   | 2 boss                                |                 | _                                                       |               |
| Cement type                                      | Type I pulled                         |                 |                                                         |               |
| Quantity of bentonite used (lbs.)                | 10/65                                 |                 |                                                         | 1             |
| Quantity of calcium chloride used (lbs.)         |                                       |                 |                                                         |               |
| Volume of grout prepared (gal.)                  |                                       |                 |                                                         |               |
| Volume of grout used (gal.)                      | 3 gullons                             |                 |                                                         |               |
| COMMENTS.                                        |                                       | 7               |                                                         |               |
| COMMENTS:  Knockel art exel cayo;                | Tremme most                           |                 | relevant decommissionir<br>rilled, interval grouted, ca |               |
| pull protection cases &                          | DUC backfull                          | well stickup, e |                                                         |               |
| has with remain                                  | wort core soul                        | <b>-</b>        |                                                         |               |
|                                                  |                                       |                 |                                                         |               |

Drilling Contractor

Department Representative

Cosing pulled

8.4/5.4

| WELL DECOMMISSIONING RECORD                |                                                              |
|--------------------------------------------|--------------------------------------------------------------|
|                                            |                                                              |
| Site Name: SENECH ARMY NEPOT               | Well ID: MW47                                                |
| Site Location: SEAN - Ash Candfull         | Driller: David Lions                                         |
| Drilling Company: Gedogic North star       | Inspector: Seatt Nillman                                     |
| Diming company. Beauty                     | Date: 1/26-/2011                                             |
| DECOMMISSIONING DATA                       | 111111111111111111111111111111111111111                      |
|                                            | WELL SCHEMATIC*                                              |
| (Fill in all that apply)                   | Depth 22 Sticky 1 Tol To                                     |
| OVERDRILLING                               | De a stell los                                               |
| Interval Drilled                           |                                                              |
| Drilling Method(s)                         | 8.5                                                          |
| Borehole Dia. (in.)                        | Bolled 8.3                                                   |
| Temporary Casing Installed? (y/n)          |                                                              |
| Depth temporary casing installed           | 5 -12                                                        |
| Casing type/dia. (in.)                     | - De Grow                                                    |
| Method of installing                       |                                                              |
|                                            | = cosing 6                                                   |
| CASING PULLING                             |                                                              |
| Method                                     | 0                                                            |
| Casing retrieved (feet)                    |                                                              |
| Casing type/dia. (in.)                     |                                                              |
|                                            |                                                              |
| CASE PERFORATING                           |                                                              |
| Equipment used                             |                                                              |
| Number of perforations/foot                | - Pot                                                        |
| Size of perforations                       | Dri) led                                                     |
| Interval perforated                        | Diview                                                       |
| GROUTING                                   |                                                              |
| Interval grouted (FBLS)                    |                                                              |
| # of batches prepared                      |                                                              |
| For each batch record:                     |                                                              |
| Quantity of water used (gal.)              |                                                              |
| Quantity of cement used (lbs.)             |                                                              |
| Cement type Type 1 Part and                |                                                              |
| Quantity of bentonite used (lbs.)          |                                                              |
| Quantity of calcium chloride used (lbs.)   |                                                              |
| Volume of grout prepared (gal.)            |                                                              |
| Volume of grout used (gal.)                |                                                              |
|                                            |                                                              |
| COMMENTS: Apth to water = 3.91. At. fm7    | * Sketch in all relevant decommissioning data, including     |
| Knocked out end slug: Loaded casing with   | interval overdrilled, interval grouted, casing left in hole, |
| grants Pulled rading Full recovery. Topled | well stickup, etc.                                           |
| Joff grout to surface.                     |                                                              |
| 1 · 1 4 ()                                 |                                                              |
| Geologic North Star                        |                                                              |
| Orilling Contractor                        | Department Representative                                    |

| WELL DECOMMISSIONING R                   | ECORD         |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------|---------------|-----------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: As and SEAD                   |               | Well ID:        | MW-49 D                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Location: SEAD 6                    |               | Driller:        |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Drilling Company: (Select N              | 5             | Inspector:      | incoffee                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Drining Company.                         |               | Date:           |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                          |               | Date.           | WELL COLENATION                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DECOMMISSIONING I                        |               | Donth           | WELL SCHEMATIC*                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| (Fill in all that apply                  | )             | Depth<br>(feet) | N √ 3 <sup>3</sup>                            | 7-70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <u>OVERDRILLING</u>                      |               | (leet)          |                                               | 250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Interval Drilled                         |               |                 | · — X                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Drilling Method(s)                       |               |                 |                                               | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Borehole Dia. (in.)                      |               |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Temporary Casing Installed? (y/n)        |               |                 | $\neg$ $M$                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Depth temporary casing installed         |               | 16              |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing type/dia. (in.)                   |               |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Method of installing                     |               |                 |                                               | 1/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| interior of mounting                     |               |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CASING PULLING                           |               |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Method employed                          |               | 26              |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing retrieved (feet)                  |               | -               |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing type/dia. (in.)                   |               |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                          |               |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CASE PERFORATING                         |               |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Equipment used                           |               | 30              |                                               | rel-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Number of perforations/foot              |               |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Size of perforations                     |               |                 |                                               | 35 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Interval perforated                      |               |                 |                                               | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                          |               | 4.              |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| GROUTING                                 |               | 40              |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Interval grouted (FBLS)                  | 35            |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| # of batches prepared                    |               |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| For each batch record:                   |               |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of water used (gal.)            | 18            |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of cement used (lbs.)           | Logs          |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Cement type                              | LYDE FRONTIAL |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of bentonite used (lbs.)        | 10 163        |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of calcium chloride used (lbs.) |               |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Volume of grout prepared (gal.)          | 0.01          |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Volume of grout used (gal.)              | 89 allons     |                 | _                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| COMMENTS:                                |               | * Skatah in all | relevant decommissioning data, including:     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Knoder out end cap fol                   | ted cosy with |                 | illed, interval grouted, casing left in hole, |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| tremuse grout pulled pre                 |               | well stickup, e |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| remain pre in place                      | ,             |                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                          |               |                 |                                               | Marian Cold of Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Cold of the Col |

Drilling Contractor

Department Representative

Pulled 3 bollands & protective cosys Gnowt in Place 35

| WELL DECOMMISSIONING RECORI                                                                                                                                                         | )                  |          |                                                                                        |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|----------------------------------------------------------------------------------------|-------------|
| Site Name: ASh Landhill                                                                                                                                                             | - W                | /ell ID: | MW-50D                                                                                 |             |
| Site Location: SGAD6                                                                                                                                                                | D                  | riller:  | Landue                                                                                 |             |
| Drilling Company: Godgde Northson                                                                                                                                                   | Ir                 | spector: |                                                                                        |             |
| Drining company.                                                                                                                                                                    |                    | ate:     |                                                                                        |             |
| DECOMMISSIONING DATA (Fill in all that apply)                                                                                                                                       | D                  |          | WELL SCHEMATIC*                                                                        | 59 France,  |
| OVERDRILLING Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing |                    | 10       |                                                                                        |             |
| CASING PULLING  Method employed  Casing retrieved (feet)  Casing type/dia. (in.)                                                                                                    |                    | 20       |                                                                                        | Gualt 1     |
| CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated                                                                                |                    | 30       |                                                                                        | 574         |
| GROUTING Interval grouted (FBLS) # of batches prepared                                                                                                                              | 7.8                | 40       |                                                                                        |             |
| For each batch record:  Quantity of water used (gal.)  Quantity of cement used (lbs.)  Cement type  Quantity of bentonite used (lbs.)                                               | B<br>Cgs<br>Tpoalu | 50       |                                                                                        |             |
| Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.)                                                                                | sollars            | 68       |                                                                                        | <u>52.8</u> |
| COMMENTS: Pulled Riser, Abellace, Tremme 20 gallons, pulled top of pic 1.  4ff cut of 2 Seel risers.                                                                                | e grout in         |          | elevant decommissioning data, including<br>led, interval grouted, casing left in hole, |             |

**Drilling Contractor** 

Department Representative

Pulled 3 bollands & protective casty. Great in place 57.8

| WELL DECOMMISSIONING RECORD              |            | 5                                        |                                             |       |
|------------------------------------------|------------|------------------------------------------|---------------------------------------------|-------|
|                                          |            |                                          | <b>.</b>                                    |       |
| Site Name: SENECH ARMY NEPST             |            | Well ID:                                 | MW51D                                       |       |
| Site Location: SEAD - Ash Langfill       |            | Driller: Do                              | wid Lions                                   |       |
| Drilling Company: Gedogic North St.      | a/         |                                          | Sert Sillman                                |       |
| Jagar                                    |            |                                          |                                             | oИ    |
| DECOMMISSIONING DATA                     |            | Daile: []                                | WELL SCHEMATIC*                             | 211   |
| (Fill in all that apply)                 |            | Depth                                    | WELL SCHEMATIC                              |       |
| (I'm m an that appry)                    |            | (feet)                                   | 2.5 Stickey 1 1 7                           | PTO   |
| OVERDRILLING                             |            | 0                                        |                                             | TD    |
| Interval Drilled                         |            |                                          | 799                                         |       |
| Drilling Method(s)                       |            |                                          | I soil ill fil                              | 35.   |
| Borehole Dia. (in.)                      |            |                                          | - backfill                                  |       |
| Temporary Casing Installed? (y/n)        |            | ,                                        | 5-2011.1                                    |       |
| Depth temporary casing installed         |            | 10                                       | 11 11                                       | +     |
| Casing type/dia. (in.)                   |            |                                          | 4 7 6                                       | 100   |
| Method of installing                     |            |                                          | = stee                                      |       |
|                                          |            |                                          | Lasting"                                    |       |
| CASING PULLING                           |            | 20                                       | - in Plan                                   |       |
|                                          | ce         |                                          |                                             |       |
| Casing retrieved (feet)                  | te         |                                          | - 11 1/                                     |       |
| Casing type/dia. (in.)                   | VC         |                                          |                                             |       |
| CASE PERFORATING                         |            | 20                                       | -2                                          |       |
| Equipment used                           |            | 30                                       | - PJC \                                     |       |
| Number of perforations/foot              |            |                                          |                                             |       |
| Size of perforations                     |            |                                          | - flace 3                                   | 211   |
| Interval perforated                      |            |                                          | = /late                                     | 54    |
| GROUTING                                 |            |                                          | - 1                                         |       |
| Interval grouted (FBLS)                  | CCIL       |                                          | - /                                         |       |
| # of batches prepared                    | 311        |                                          | 1 1 1 2                                     | OT    |
| For each batch record:                   |            |                                          | 1/30                                        | 1/ 1  |
| Quantity of water used (gal.)            |            |                                          | 1 00.                                       | 11201 |
| Quantity of cement used (lbs.)           | 5          |                                          |                                             |       |
| Cement type                              | Partland   |                                          |                                             |       |
| Quantity of bentonite used (lbs.)        | conds      |                                          |                                             |       |
| Quantity of calcium chloride used (lbs.) |            |                                          |                                             |       |
| Volume of grout prepared (gal.)          |            |                                          |                                             |       |
| Volume of grout used (gal.)              |            |                                          |                                             |       |
| A 11                                     | 1. 5       |                                          |                                             |       |
| COMMENTS: Apth to water = NA             | ft. fmTcc  |                                          | elevant decommissioning data, including:    |       |
| Knocked out end slug. Coaded casin       | ew itt     | interval overdrill<br>well stickup, etc. | led, interval grouted, casing left in hole, |       |
| greate continuel to add growt at         | Tet my.    | an antanip, etc.                         |                                             |       |
| Casing out off. Grantest in place.       | Covered    | 1                                        |                                             |       |
| Geologic North Star ho                   | le with 50 |                                          |                                             |       |
| Drilling Contractor                      | De         | partment Represe                         | ntative                                     |       |

| WELL DECOMMISSIONING RECORD              | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                      |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| WELL DECOMMODIONING RECORD               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3                                    |
| Site Name: SENECH ARMY NEPOT             | Well ID: M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | WSZD                                 |
| Site Location: SEAD - Ash Landfill       | Driller: Dev.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4 Lions                              |
| Drilling Company: Geologic North Sta     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | att Nillman                          |
| January                                  | Date: 1/25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 72011 1/26/2011                      |
| DECOM DISCOVERISE DATA                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                                    |
| DECOMMISSIONING DATA                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | LL SCHEMATIC*                        |
| (Fill in all that apply)                 | Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | - 35tickup Top To                    |
| OVERDRILLING                             | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Removed TD                           |
| Interval Drilled                         | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                      |
| Drilling Method(s)                       | <u> </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 58.                                  |
| Borehole Dia. (in.)                      | - x                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | her detill                           |
| Temporary Casing Installed? (y/n)        | 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                      |
| Depth temporary casing installed         | - 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                      |
| Casing type/dia. (in.)                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | " steel Grou                         |
| Method of installing                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 6 ms ( m) 1 1                        |
| a landa Na Lada                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - 1 -9 ( ) ( )                       |
| CASING PULLING                           | 7 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | - place                              |
| Method employed Grautinpla               | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                      |
| Casing retrieved (feet)                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4, 11                                |
| Casing type/dia. (in.)                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Steel Steel                          |
| CASE PERFORATING                         | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | in place                             |
| Equipment used                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 101                                  |
| Number of perforations/foot              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | H - H                                |
| Size of perforations                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                      |
| Interval perforated                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                      |
| GROUTING                                 | 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2                                    |
| Interval grouted (FBLS) 0 - 58.7         | 74                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |
| # of batches prepared                    | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | - IVC                                |
| For each batch record:                   | _   .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | in place                             |
| Quantity of water used (gal.)            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                      |
| Quantity of cement used (lbs.)           | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |
| Cement type Type 1 Pa                    | +                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                      |
| Quantity of bentonite used (lbs.)        | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                      |
| Quantity of calcium chloride used (lbs.) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                      |
| Volume of grout prepared (gal.)          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 1007                               |
| Volume of grout used (gal.)              | 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 58.7                                 |
|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | _                                    |
| COMMENTS: Apth to water = 4.10           | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s | t decommissioning data, including:   |
| Knocked out end slug. Loaded casing a    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | terval grouted, casing left in hole, |
| greate Continued to add growt offe,      | vell stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      |
| oct off steel carings, covered with s    | eile t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                      |
| Geologic North Star                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                      |
| Drilling Contractor                      | Department Representativ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ve.                                  |
|                                          | The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon |                                      |

| WELL DECOMMISSIONING I                              | RECORD        |                   |                                                           |                                     |      |
|-----------------------------------------------------|---------------|-------------------|-----------------------------------------------------------|-------------------------------------|------|
| Site Name: Ash Landfull                             |               | Well ID:          | MW.53                                                     |                                     | 1    |
| Site Location: SEAD -6                              |               | Driller:          |                                                           |                                     | 1    |
|                                                     |               | Inspector:        | McAllister                                                |                                     | 1    |
| Drilling Company: Geologic                          |               | Date:             | 71000111010                                               | ************                        | 1    |
| PROOF B GGGGONDIC                                   | DATA          |                   | WELL SCHEMATI                                             | C*                                  | 1    |
| DECOMMISSIONING                                     |               | Depth             | WELL SCHEMAII                                             |                                     |      |
| (Fill in all that app                               | iy)           | (feet)            |                                                           | 1/1200                              |      |
| <u>OVERDRILLING</u>                                 |               | (1001)            |                                                           | 205                                 | Hey) |
| Interval Drilled                                    |               |                   |                                                           |                                     | 1    |
| Drilling Method(s)                                  |               |                   |                                                           | 100                                 |      |
| Borehole Dia. (in.)                                 |               |                   |                                                           | XI /                                |      |
| Temporary Casing Installed? (y/n)                   |               |                   |                                                           | 14 /                                |      |
| Depth temporary casing installed                    |               | 2                 |                                                           |                                     |      |
| Casing type/dia. (in.)                              |               |                   |                                                           |                                     |      |
| Method of installing                                |               |                   |                                                           | IXI I                               |      |
|                                                     |               | 1                 |                                                           | 141                                 |      |
| CASING PULLING                                      | 0 4           | 4                 |                                                           |                                     |      |
| Method employed                                     | 8.4           |                   | -                                                         | $\mathcal{N} \setminus \mathcal{N}$ |      |
| Casing retrieved (feet)                             | King          |                   |                                                           | $M \setminus$                       |      |
| Casing type/dia. (in.)                              | 2 pvc         |                   |                                                           | >                                   | 80   |
| CASE DEDEORATING                                    |               | /                 |                                                           |                                     |      |
| CASE PERFORATING                                    |               | 6                 |                                                           | $\times$                            |      |
| Equipment used                                      |               |                   | -                                                         |                                     |      |
| Number of perforations/foot<br>Size of perforations |               |                   |                                                           | {                                   |      |
| Interval perforated                                 |               |                   |                                                           | $M \setminus V$                     |      |
| Interval periorated                                 |               | 8                 |                                                           |                                     |      |
| GROUTING                                            |               |                   |                                                           |                                     |      |
| Interval grouted (FBLS)                             | 8-44          |                   |                                                           |                                     |      |
| # of batches prepared                               | 1             |                   |                                                           |                                     | İ    |
| For each batch record:                              |               |                   |                                                           |                                     |      |
| Quantity of water used (gal.)                       | 18gellas      | 10                |                                                           |                                     |      |
| Quantity of cement used (lbs.)                      | Type I pout   | (0                |                                                           | $Y \setminus J$                     |      |
| Cement type                                         | 249463        |                   |                                                           | 10.4                                |      |
| Quantity of bentonite used (lbs.)                   | 10 (65        |                   |                                                           | 7                                   | 100  |
| Quantity of calcium chloride used (lbs.)            |               |                   |                                                           |                                     |      |
| Volume of grout prepared (gal.)                     | 7 14          |                   |                                                           |                                     |      |
| Volume of grout used (gal.)                         | Gections      |                   |                                                           |                                     |      |
| COMMENTS.                                           |               | 7                 |                                                           |                                     |      |
| COMMENTS:                                           | remare quest  |                   | elevant decommissioning d<br>led, interval grouted, casin |                                     |      |
| Il man a contract of Date I                         | xxxxivil will | well stickup, etc |                                                           | <b>.</b>                            |      |
|                                                     | Soul.         | -                 |                                                           |                                     |      |
| Cold remains (1)                                    |               |                   |                                                           |                                     | J    |

Drilling Contractor

Department Representative

Costy pulled

TD . 10-4

MW.53

MW.54D

### Table 2-4 Well Decommissioning Record Well Abandonment Plan Seneca Army Depot Activity

| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                                                                                                                                                                                                         | MW. 54D                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: Ash Landvll                                                                                                                                                                                                                                                                                                                                                                                                              | Well ID:                                                                                                                                  |
| Site Location: SEMD 6                                                                                                                                                                                                                                                                                                                                                                                                               | Driller:                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                     | Inspector:                                                                                                                                |
| Dritting Company.                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                           |
| Decommissioning Data (Fill in all that apply)  OVERDRILLING Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing  CASING PULLING Method employed Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations/foot Size of perforated  GROUTING Interval grouted (FBLS) | Date:  WELL SCHEMATIC*  Depth (feet)  32.44  35.4                                                                                         |
| Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.)  COMMENTS:  KINGO (XXI) WHON CF WELL FIRMING GYCKENEL WALL WHO VEMAY GUITE                                                                     | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |

Drilling Contractor

3 bollows

Department Representative

Grout in place protectives cosy

MW.54D TD: 35 Grade 32.4

| WELL DECOMMISSIONING RECORD              |                                                                                                                       |         |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------|
| Asla Levalled                            | Well ID: MW·S5D                                                                                                       | 1       |
| Site Name: 150 Land                      | Driller:                                                                                                              | 1       |
| Site Location: SEAD 6                    | .418                                                                                                                  | 1       |
| Drilling Company: Geologic               |                                                                                                                       | 1       |
| V                                        | Date:                                                                                                                 | -       |
| DECOMMISSIONING DATA                     | WELL SCHEMATIC*                                                                                                       |         |
| (Fill in all that apply)                 | Depth                                                                                                                 | 1.L. ap |
|                                          | (feet)                                                                                                                | 7       |
| OVERDRILLING                             | — — X — X                                                                                                             | -       |
| Interval Drilled                         |                                                                                                                       |         |
| Drilling Method(s)                       | - 1/1: 1                                                                                                              |         |
| Borehole Dia. (in.)                      |                                                                                                                       |         |
| Temporary Casing Installed? (y/n)        | (O —                                                                                                                  |         |
| Depth temporary casing installed         |                                                                                                                       |         |
| Casing type/dia. (in.)                   | -                                                                                                                     | 1       |
| Method of installing                     | <u> </u>                                                                                                              |         |
| CASING PULLING                           | 20 🗆 📉                                                                                                                |         |
| Method employed                          |                                                                                                                       |         |
| Casing retrieved (feet)                  | -                                                                                                                     |         |
| Casing type/dia. (in.)                   |                                                                                                                       |         |
| Casing type/dia. (iii.)                  |                                                                                                                       |         |
| CASE PERFORATING                         | 30 🗆 🛝 🔪                                                                                                              | 55.8    |
| Equipment used                           |                                                                                                                       | 00.0    |
| Number of perforations/foot              |                                                                                                                       |         |
| Size of perforations                     |                                                                                                                       |         |
| Interval perforated                      |                                                                                                                       |         |
|                                          | 40 🗏 🚺                                                                                                                |         |
| GROUTING                                 | το                                                                                                                    |         |
| Interval grouted (FBLS) 55.8             |                                                                                                                       |         |
| # of batches prepared 2                  |                                                                                                                       |         |
| For each batch record:                   |                                                                                                                       |         |
| Quantity of water used (gal.)            | 50                                                                                                                    |         |
| Quantity of cement used (lbs.)           |                                                                                                                       |         |
| Cement type                              |                                                                                                                       |         |
| Quantity of bentonite used (lbs.)        |                                                                                                                       |         |
| Quantity of calcium chloride used (lbs.) |                                                                                                                       |         |
| Volume of grout prepared (gal.)          | - + - CB                                                                                                              |         |
| Volume of grout used (gal.)              |                                                                                                                       | 1       |
| COMMENTS.                                | 1                                                                                                                     |         |
| COMMENTS:                                | * Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, |         |
|                                          | well stickup, etc.                                                                                                    |         |
|                                          |                                                                                                                       |         |

Drilling Contractor
3 bollands

Growt in place = 55

Department Representative

MW.55D

TD: 58:1 Grade: 55.8

| WELL DECOMMISSIONING RECORD                                                 |                                                              |
|-----------------------------------------------------------------------------|--------------------------------------------------------------|
|                                                                             | 1                                                            |
| Site Name: SENECH ARMY DEPOT                                                | Well ID: MW 57 D                                             |
| Site Location: SEAD - ASH LAW OFILL                                         | Driller: David Lions                                         |
| Drilling Company: Geologic North Star                                       | Inspector: Scatt DillMan                                     |
| J                                                                           | Date: 1/26/2011                                              |
| DECOMMISSIONING DATA                                                        | WELL SCHEMATIC*                                              |
| (Fill in all that apply)                                                    | Depth 1.9ff                                                  |
|                                                                             | (feet) STORY TO                                              |
| OVERDRILLING                                                                | (leet) O Removed TD                                          |
| Interval Drilled                                                            | 35./                                                         |
| Drilling Method(s)                                                          | 1 1 2001                                                     |
| Borehole Dia. (in.)                                                         |                                                              |
| Temporary Casing Installed? (y/n)                                           | 12                                                           |
| Depth temporary casing installed                                            | 10 There Grow                                                |
| Casing type/dia. (in.)                                                      | 5 04 1000                                                    |
| Method of installing                                                        | [ con's]                                                     |
| CASING PULLING                                                              | = inplace                                                    |
|                                                                             | 20 -                                                         |
| Method employed Casing retrieved (feet)  GFOUT IN Place                     | -                                                            |
| Casing type/dia. (in.)                                                      |                                                              |
| Casing type dia. (iii.)                                                     | 720                                                          |
| CASE PERFORATING                                                            | 1                                                            |
| Equipment used                                                              | 30 = cusin                                                   |
| Number of perforations/foot                                                 |                                                              |
| Size of perforations                                                        | - 1 mile 33.2                                                |
| Interval perforated                                                         |                                                              |
| GROUTING                                                                    | 40 -                                                         |
| Interval grouted (FBLS)                                                     |                                                              |
| # of batches prepared                                                       |                                                              |
| For each batch record:                                                      |                                                              |
| Quantity of water used (gal.)                                               | - wat                                                        |
| Quantity of cement used (lbs.) Zbans                                        |                                                              |
| Cement type Type 1 Part and                                                 | - / DN/4                                                     |
| Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.) |                                                              |
| Quantity of calcium chloride used (lbs.)                                    |                                                              |
| Volume of grout prepared (gal.)                                             |                                                              |
| Volume of grout used (gal.)                                                 |                                                              |
|                                                                             |                                                              |
| COMMENTS: Apoth to water = 2.74 St. for                                     | Sketch in all relevant decommissioning data, including       |
| Knocked by fend stya: Loaded casing with                                    | interval overdrilled, interval grouted, casing left in hole, |
| grants cut off stickup, grant in place.                                     | well stickup, etc.                                           |
| Lorge growt lad. couldn't remove. Lit cas.                                  | w of                                                         |
| Contain North (+ - at grade i gra                                           | Hep                                                          |
| Drilling Contractor                                                         | Department Department Department                             |
| Salaria Salaria                                                             | Department Representative                                    |

| WELL DECOMMISSIONING RECORD                                          | <b></b>                                                      |  |  |  |  |
|----------------------------------------------------------------------|--------------------------------------------------------------|--|--|--|--|
| 4                                                                    | •                                                            |  |  |  |  |
| Site Name: Seneca Army Depot                                         | Well ID: MW-59                                               |  |  |  |  |
| Site Location: SEAD8- ASH LANDFILL                                   | Driller: Scott Breeds                                        |  |  |  |  |
| Drilling Company: Geologic North Star                                | Inspector: Scott Dillman                                     |  |  |  |  |
|                                                                      | Date: 9//6/10                                                |  |  |  |  |
| DECOMMISSIONING DATA                                                 | WELL SCHEMATIC*                                              |  |  |  |  |
| (Fill in all that apply)                                             |                                                              |  |  |  |  |
| (cara an apply)                                                      | (feet)                                                       |  |  |  |  |
| OVERDRILLING                                                         | O SHOKUP TOP TO TO                                           |  |  |  |  |
| Interval Drilled                                                     | 4 Soil                                                       |  |  |  |  |
| Drilling Method(s)                                                   |                                                              |  |  |  |  |
| Borehole Dia. (in.)                                                  |                                                              |  |  |  |  |
| Temporary Casing Installed? (y/n)                                    |                                                              |  |  |  |  |
| Depth temporary casing installed                                     | 5 PULLED I +                                                 |  |  |  |  |
| Casing type/dia. (in.)                                               | - PUC - Grout                                                |  |  |  |  |
| Method of installing                                                 | - Just 1 ett                                                 |  |  |  |  |
| CASING PULLING                                                       | Botton                                                       |  |  |  |  |
|                                                                      | 10 - 1 1 Well                                                |  |  |  |  |
| Method employed  Casing retrieved (feet)  Grant, Poll, Grant  1,7 CF |                                                              |  |  |  |  |
| Casing type/dia. (in.)                                               | - 1/1                                                        |  |  |  |  |
| County typodata (iii)                                                |                                                              |  |  |  |  |
| CASE PERFORATING                                                     |                                                              |  |  |  |  |
| Equipment used                                                       | 15    /                                                      |  |  |  |  |
| Number of perforations/foot                                          |                                                              |  |  |  |  |
| Size of perforations                                                 |                                                              |  |  |  |  |
| Interval perforated                                                  |                                                              |  |  |  |  |
|                                                                      | 20 = 1/                                                      |  |  |  |  |
| GROUTING                                                             | 20    /                                                      |  |  |  |  |
| Interval grouted (FBLS)                                              |                                                              |  |  |  |  |
| # of batches prepared                                                |                                                              |  |  |  |  |
| For each batch record:                                               |                                                              |  |  |  |  |
| Quantity of water used (gal.)  Quantity of cement used (lbs.)        | 25                                                           |  |  |  |  |
|                                                                      |                                                              |  |  |  |  |
| Quantity of bentonite used (lbs.)                                    | - //                                                         |  |  |  |  |
| Quantity of calcium chloride used (lbs.)                             |                                                              |  |  |  |  |
| Volume of grout prepared (gal.)                                      | DRILLED                                                      |  |  |  |  |
| Volume of grout used (gal.)                                          | 30 -  /                                                      |  |  |  |  |
| 1 1 gar                                                              |                                                              |  |  |  |  |
| COMMENTS: Depth to water = 4.27 ft from TOC                          | * Sketch in all relevant decommissioning data, including:    |  |  |  |  |
| Knocked out end cap. Loaded casing with grout.                       | interval overdrilled, interval grouted, casing left in hole, |  |  |  |  |
| Pulled casing. Granted remaining borehole.                           | well stickup, etc.                                           |  |  |  |  |
| Added soil on top.                                                   | 7                                                            |  |  |  |  |

Geologic North Star Drilling Contractor

### WELL DECOMMISSIONING RECORD Seneca Well ID: Site Name: David Cion Driller: Site Location: SEA D Inspector: Scott Dillman Drilling Company: Date: 10 DECOMMISSIONING DATA WELL SCHEMATIC\* (Fill in all that apply) Depth 10.D -0.3H (feet) stick up Removed TOP TO TO OVERDRILLING Interval Drilled Drilling Method(s) BOX Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) PUC Method of installing WELL Surtall CASING PULLING 10 Method employed Casing retrieved (feet) Bothne Casing type/dia. (in.) well CASE PERFORATING 15 Equipment used Number of perforations/foot Size of perforations Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) 25 Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) 30 Volume of grout used (gal.) COMMENTS: Depth to water ft from TOC \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole. well stickup, etc.

Geologic North Star

**Drilling Contractor** 

| WELL DECOMMISSIONING RECORD                                               |                                                              |
|---------------------------------------------------------------------------|--------------------------------------------------------------|
| St. N. Sound of Acres Acres Acres                                         | Well ID: MW PT-11                                            |
| Site Name: Seneca Army Depot Site Location: SEAD - ASTA LAND FILL         | Driller: David Lion                                          |
|                                                                           | Inspector: Scott Dillman                                     |
| Drilling Company: 6-eologic North Star                                    | 1 1                                                          |
|                                                                           | Date: 9/20/10                                                |
| DECOMMISSIONING DATA                                                      | WELL SCHEMATIC*                                              |
| (Fill in all that apply)                                                  | Depth 41" 19,5                                               |
|                                                                           | (feet) Stick up Top TO TO                                    |
| OVERDRILLING                                                              | 100 Messed                                                   |
| Interval Drilled                                                          | - Soil                                                       |
| Drilling Method(s)                                                        |                                                              |
| Borehole Dia. (in.)                                                       |                                                              |
| Temporary Casing Installed? (y/n)                                         | 5                                                            |
| Depth temporary casing installed                                          | 5 POLLED                                                     |
| Casing type/dia. (in.)                                                    | - DIC Grow                                                   |
| Method of installing                                                      | WELL Shole                                                   |
| CASING PULLING                                                            | □ Riser                                                      |
|                                                                           | 10 - 021/                                                    |
|                                                                           |                                                              |
| Casing retrieved (feet)  Casing type/dia. (in.)                           |                                                              |
| Casing type/dia. (in.)                                                    |                                                              |
| CASE PERFORATING                                                          | 15 - 4                                                       |
| Equipment used                                                            | 15 - 4                                                       |
| Number of perforations/foot                                               |                                                              |
| Size of perforations                                                      | - Jew portion                                                |
|                                                                           | - 500 1 04 1                                                 |
| Interval perforated                                                       | - well                                                       |
| GROUTING                                                                  | 20 - 100                                                     |
| Interval grouted (FBLS)                                                   |                                                              |
| # of batches prepared                                                     |                                                              |
| For each batch record:                                                    |                                                              |
| Quantity of water used (gal.)                                             |                                                              |
| Quantity of water used (glass)  Quantity of cement used (lbs.)  2 6 a q 5 | 25 - 1                                                       |
| Cement type  Type   furthered                                             |                                                              |
| Quantity of bentonite used (lbs.)                                         | NOT                                                          |
| Quantity of bentomic used (lbs.)                                          | DRILLED                                                      |
| Volume of grout prepared (gal.)                                           | DRILLED                                                      |
|                                                                           | 30 - 1/1                                                     |
| Volume of grout used (gal.) 15 gal                                        |                                                              |
| COMMENTS: Depth to water = 7,84 ft from TOC                               | * Sketch in all relevant decommissioning data, including:    |
| Knocked out end cap. Loaded casing with grout.                            | interval overdrilled, interval grouted, casing left in hole, |
| Pulled casing. Growted remaining borehole.                                | well stickup, etc.                                           |
| Added soil on top. Left 5 of screen in hole.                              | 1                                                            |
|                                                                           | Not threaded to screen. Push connection                      |

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING RECORD                                                 |                                                                                                                           |  |  |  |  |  |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| Site Name: Seneca Army Depot                                                | Well ID: MW - PT-15                                                                                                       |  |  |  |  |  |
| Site Location: SEAD ASH LAND FLIL                                           | Driller: David Lion                                                                                                       |  |  |  |  |  |
| Drilling Company: Geologic North Star                                       | Inspector: Scott Dillman                                                                                                  |  |  |  |  |  |
| Diming company. C Clark 12 12 12 12 12 12 12 12 12 12 12 12 12              | Date: 9/20/10                                                                                                             |  |  |  |  |  |
|                                                                             |                                                                                                                           |  |  |  |  |  |
| DECOMMISSIONING DATA                                                        | WELL SCHEMATIC* Depth 3 L Ft 19.6                                                                                         |  |  |  |  |  |
| (Fill in all that apply)                                                    | Depth 3.6 Ft (feet)                                                                                                       |  |  |  |  |  |
| OVERDRILLING                                                                | O stick up Top TO TI                                                                                                      |  |  |  |  |  |
| Interval Drilled                                                            | - Soil                                                                                                                    |  |  |  |  |  |
| Drilling Method(s)                                                          |                                                                                                                           |  |  |  |  |  |
| Borehole Dia. (in.)                                                         |                                                                                                                           |  |  |  |  |  |
| Temporary Casing Installed? (y/n)                                           |                                                                                                                           |  |  |  |  |  |
| Depth temporary casing installed                                            | 5 PULLED Growt                                                                                                            |  |  |  |  |  |
| Casing type/dia. (in.)                                                      | PVC Growt                                                                                                                 |  |  |  |  |  |
| Method of installing                                                        | PVC 1 107 50                                                                                                              |  |  |  |  |  |
| <u> </u>                                                                    | WELL                                                                                                                      |  |  |  |  |  |
| CASING PULLING                                                              | Riser                                                                                                                     |  |  |  |  |  |
| Method employed Grout, Poll, Growt                                          | 10 -                                                                                                                      |  |  |  |  |  |
| Casing retrieved (feet)                                                     |                                                                                                                           |  |  |  |  |  |
| Casing type/dia. (in.)                                                      |                                                                                                                           |  |  |  |  |  |
|                                                                             | st Growtel                                                                                                                |  |  |  |  |  |
| CASE PERFORATING                                                            | 15 Left > Screen                                                                                                          |  |  |  |  |  |
| Equipment used                                                              | 15 Jest 7 = 305001                                                                                                        |  |  |  |  |  |
| Number of perforations/foot                                                 | Julean Botton                                                                                                             |  |  |  |  |  |
| Size of perforations                                                        | Push enter of                                                                                                             |  |  |  |  |  |
| Interval perforated                                                         | LIMIN                                                                                                                     |  |  |  |  |  |
|                                                                             | 20 = wet well well                                                                                                        |  |  |  |  |  |
| GROUTING                                                                    | the earlier /                                                                                                             |  |  |  |  |  |
| Interval grouted (FBLS)                                                     |                                                                                                                           |  |  |  |  |  |
| # of batches prepared                                                       | / /                                                                                                                       |  |  |  |  |  |
| For each batch record:                                                      |                                                                                                                           |  |  |  |  |  |
| Quantity of water used (gal.)  Quantity of cement used (lbs.)  2 6 a 5      | 25 -                                                                                                                      |  |  |  |  |  |
|                                                                             |                                                                                                                           |  |  |  |  |  |
| Cement type  Ouantity of bentonite used (lbs.)                              | NOT                                                                                                                       |  |  |  |  |  |
| Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.) |                                                                                                                           |  |  |  |  |  |
| Volume of grout prepared (gal.)                                             | DRILLE                                                                                                                    |  |  |  |  |  |
|                                                                             | 30 - 1/1                                                                                                                  |  |  |  |  |  |
| Volume of grout used (gal.)                                                 |                                                                                                                           |  |  |  |  |  |
| COMMENTS: Depth to water = 9.45 ft from TOC                                 | * Skatch in all salavant decompositions and the Land                                                                      |  |  |  |  |  |
| Knocked out end cap. Loaded casing with grout.                              | * Sketch in all relevant decommissioning data, including:<br>interval overdrilled, interval grouted, casing left in hole, |  |  |  |  |  |
| Priled Casing. Growted remaining borehole.                                  | well stickup, etc.                                                                                                        |  |  |  |  |  |
| Added soil on top. No Road.                                                 | ·                                                                                                                         |  |  |  |  |  |

Geologic North Star

Drilling Contractor

| WELL DECOMMISSIONING RECORD                                                 |                                                              |     |
|-----------------------------------------------------------------------------|--------------------------------------------------------------|-----|
| Site Name: Ash Landhull                                                     | Well ID: DT-21A                                              |     |
| Site Location: SEAD 6                                                       | Driller:                                                     |     |
|                                                                             | Inspector: Mullo Sur                                         |     |
| Drilling Company: Crestof be                                                | Date:                                                        |     |
|                                                                             |                                                              |     |
| DECOMMISSIONING DATA                                                        | WELL SCHEMATIC*                                              |     |
| (Fill in all that apply)                                                    | Depth (feet)                                                 |     |
| OVERDRILLING                                                                | (leet)                                                       | •   |
| Interval Drilled                                                            |                                                              |     |
| Drilling Method(s)                                                          |                                                              |     |
| Borehole Dia. (in.)                                                         |                                                              |     |
| Temporary Casing Installed? (y/n)                                           |                                                              |     |
| Depth temporary casing installed                                            | $-5$ $\rightarrow$ $\times$                                  |     |
| Casing type/dia. (in.)                                                      |                                                              |     |
| Method of installing                                                        |                                                              |     |
|                                                                             |                                                              |     |
| CASING PULLING                                                              | (0 - K)                                                      |     |
| Method employed                                                             |                                                              |     |
| Casing retrieved (feet)                                                     |                                                              |     |
| Casing type/dia. (in.)                                                      | - $M$                                                        |     |
| CASE PERFORATING                                                            |                                                              |     |
| Equipment used                                                              | 15                                                           |     |
| Number of perforations/foot                                                 |                                                              |     |
| Size of perforations                                                        |                                                              |     |
| Interval perforated                                                         |                                                              |     |
| I to the second                                                             |                                                              |     |
| GROUTING                                                                    |                                                              | _   |
| Interval grouted (FBLS)                                                     |                                                              | 204 |
| # of batches prepared                                                       |                                                              | •   |
| For each batch record:                                                      |                                                              |     |
| Quantity of water used (gal.)                                               |                                                              |     |
| Quantity of cement used (lbs.)                                              |                                                              |     |
| Cement type  Overtity of hontonite used (lbs.)                              |                                                              |     |
| Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.) |                                                              |     |
| Volume of grout prepared (gal.)                                             |                                                              |     |
| Volume of grout used (gal.)  Volume of grout used (gal.)                    |                                                              |     |
|                                                                             | J                                                            |     |
| COMMENTS:                                                                   | * Sketch in all relevant decommissioning data, including     | ς:  |
| Knocked out evel cap tremmed in                                             | interval overdrilled, interval grouted, casing left in hole, |     |
| accit, Dulled entire ove & Riser                                            | well stickup, etc.                                           |     |
| ropped off grout so'd come                                                  |                                                              |     |

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Procede Coss & Concert

Department Representative

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|------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| St. New Sound Association                                              | Well ID: MW PT-23                                            | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Site Name: Seneca Army Depot                                           | Driller: Drived L                                            | 2.40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Site Location: SEAD ASH LANDFILL                                       | Inspector: Scott Dillman                                     | OFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Drilling Company: Geologic North Star                                  |                                                              | leper de l'archite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                        | Date: 9/20/10                                                | and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t |
| DECOMMISSIONING DATA                                                   | WELL SCHEMATIC*                                              | TI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| (Fill in all that apply)                                               | Depth 2.84 10.5                                              | 竹                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| OMEDDAN I INC                                                          | (feet)  Stick up  Removed  Top To                            | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| OVERDRILLING Interval Drilled                                          | Tamesed - Soil                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Drilling Method(s)                                                     | 1 +7 301                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Borehole Dia. (in.)                                                    |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Temporary Casing Installed? (y/n)                                      |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Depth temporary casing installed                                       | 5 PULLED                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing type/dia. (in.)                                                 | DNC - Grow                                                   | +                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Method of installing                                                   | PNC Grow                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                        |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CASING PULLING                                                         | Both                                                         | W.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Method employed Grout, Poil, Grout                                     | 10 - 10                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing retrieved (feet) 10.5 ft.                                       | - well                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing type/dia. (in.)                                                 |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| CASE PERFORATING                                                       |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Equipment used                                                         | 15                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Number of perforations/foot                                            |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Size of perforations                                                   |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| GDOLISTO IO                                                            | 20                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| GROUTING                                                               |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Quantity of water used (gal.)                                          |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of water used (gar.)  Quantity of cement used (lbs.)  2-6aq.5 | 25                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Quantity of calcium chloride used (lbs.)                               | DRILL                                                        | -1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| COMMENTS: Depth to water = ASINA ft from TOC                           | * Sketch in all relevant decommissioning data, including:    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Added soil on top.                                                     |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

Geologic North Star Drilling Contractor

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Growted rema                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ining borehole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |                      |          |                                                              |
| Added soil on top.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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| WELL DECOMMISSIONING RECORD                                              | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| and the same Accept                                                      | Well ID: MW 4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Name: Seneca Army Aepot                                             | Driller: Scott Breeds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Site Location: SEAD4                                                     | Inspector: Scott Dillman                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Drilling Company: Geologic North Star                                    | 2 0 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                          | Date: 9/17/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| DECOMMISSIONING DATA                                                     | WELL SCHEMATIC*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| (Fill in all that apply)                                                 | Depth 2.2', 12.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                          | (feet) Stick up Top To TD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| OVERDRILLING                                                             | Removed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Interval Drilled                                                         | - + F 3011                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Drilling Method(s)                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Borehole Dia. (in.)                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Temporary Casing Installed? (y/n)                                        | 5 JOHLED !                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Depth temporary casing installed                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing type/dia. (in.)                                                   | - PUC Grow                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Method of installing                                                     | - WELL ET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CASING PULLING                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Method employed Grout, Poil, Grout                                       | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Casing retrieved (feet)                                                  | Botlan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Casing type/dia. (in.)                                                   | 7.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Casing typoraia. (iii.)                                                  | _   well                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| CASE PERFORATING                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Equipment used                                                           | <u> 15</u> ] ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Number of perforations/foot                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Size of perforations                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Interval perforated                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                          | 20 -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| GROUTING                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Interval grouted (FBLS)                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| # of batches prepared                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| For each batch record:                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of water used (gal.)                                            | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Quantity of cement used (lbs.)                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Cement type  Cuantity of hentonite used (lbs.)                           | NOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Quality of contonic and (1991)                                           | DRILLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) | DRILLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Volume of grout used (gal.)                                              | 30 - 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Volume of groundsod (gain)                                               | description of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of t |
| COMMENTS: Depth to water = 7.58 ft from TOC                              | * Sketch in all relevant decommissioning data, including:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Knocked out end cap. Loaded casing with grout.                           | interval overdrilled, interval grouted, casing left in hole,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Pulled casing. Growted remaining borehole.                               | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Added soil in top.                                                       | L AND AND AND AND AND AND AND AND AND AND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| WELL DECOMMISSIONING RI                                  | ECORD       |            | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |
|----------------------------------------------------------|-------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Site Name: SEAD - 4                                      |             | Well ID:   | MW4-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |
|                                                          | IC 1/4.     | Driller:   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Site Location: Municipus Work of                         | or facility | Inspector: | Mudlisk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |
| Drilling Company:                                        |             |            | INCOLUL DO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |
|                                                          |             | Date:      | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |               |
| DECOMMISSIONING D                                        |             | <b>5</b>   | WELL SCHEMATIC*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | TORCO         |
| (Fill in all that apply)                                 |             | Depth      | t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 100           |
|                                                          |             | (feet)     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7             |
| <u>OVERDRILLING</u>                                      |             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Interval Drilled                                         |             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Drilling Method(s)                                       |             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1. 1          |
| Borehole Dia. (in.)                                      |             | 1          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Temporary Casing Installed? (y/n)                        |             | 1          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 / 1         |
| Depth temporary casing installed                         |             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Casing type/dia. (in.)                                   |             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 / 1         |
| Method of installing                                     |             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ///           |
| CASING PULLING                                           |             | 2          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1/1           |
| Method employed                                          | Dull        | (          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 / 1         |
| Casing retrieved (feet)                                  | 54          |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Casing type/dia. (in.)                                   | 2" DVC      |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Casing type/dia. (iii.)                                  |             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| CASE PERFORATING                                         |             | 3          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 /- 3/       |
| Equipment used                                           | -26         | )          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 100           |
| Number of perforations/foot                              | 3.4 / A     |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Size of perforations                                     | 1 per       |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | \             |
| Interval perforated                                      |             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
|                                                          |             | 4          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| <u>GROUTING</u>                                          |             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Interval grouted (FBLS)                                  | 314         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| # of batches prepared                                    |             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| For each batch record:                                   | 10          |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | $\mathcal{Y}$ |
| Quantity of water used (gal.)                            | 18 galais   | 5          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Quantity of cement used (lbs.)                           | 188005      |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 50            |
| Cement type                                              | powled #    |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Quantity of bentonite used (lbs.)                        | 10 163      |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Quantity of calcium chloride used (lbs.)                 |             |            | <u> </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |
| Volume of grout prepared (gal.)                          | 10 - // -   |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Volume of grout used (gal.)                              | 10 galles   |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ,             |
| COMMENTS:  Derherolo (USU). Gront,  Remone plotodos cons | outcasing.  |            | all relevant decommissioning data, is drilled, interval grouted, casing left etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |

Drilling Contractor

Department Representative

pull Cash.

| WELL DECOMMISSIONING R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ECORD                     |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |           |
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| Site Name: Seneca Army De                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ant .                     | Well ID:                                | MW4          | - 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |           |
| Site Location: SEAD-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           | Driller:                                |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dav               | id Lion   |
| Drilling Company: Geologic North                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Star                      | Inspector: _                            | Scott        | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |                   |           |
| Jaming Company. C College 10077                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                           | Date: 9                                 | 4 2          | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | make and the same |           |
| DECOMMISSIONING I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DATA                      |                                         | -            | CHEMATIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | *                 |           |
| (Fill in all that apply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                           | Depth                                   | W LLL 3      | CHEWATIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   | 11.4      |
| (1.111 III all that apply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>'</b>                  | (feet)                                  |              | 1-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   | 100       |
| OVERDRILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           | 0                                       |              | stick up<br>Rumoved                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   | TOP TO TO |
| Interval Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                                         |              | - Control of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   | Soil      |
| Drilling Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                                         |              | To the second                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1                 |           |
| Borehole Dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                                         |              | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |           |
| Temporary Casing Installed? (y/n)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                                         |              | _                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |           |
| Depth temporary casing installed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           | 5                                       |              | DULLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   | 5         |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                           |                                         |              | 016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                 | Grout     |
| Method of installing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                                         |              | PULLED<br>PUL<br>WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | E                 | -         |
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| Casing retrieved (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 11.4 04                   |                                         | -            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | Dollows   |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2" PVC                    |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |           |
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| CASE PERFORATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           | 15                                      |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |           |
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| Number of perforations/foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                           |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | V                 |           |
| Size of perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1/                |           |
| Interval perforated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |           |
| CROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           | 20                                      |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 /               |           |
| GROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | [ 1 a a a a a             |                                         | -            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |           |
| Interval grouted (FBLS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1-9.2 FH                  |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |           |
| # of batches prepared For each batch record:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |           |
| Quantity of water used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 18                        |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 /               |           |
| Quantity of water used (gar.)  Quantity of cement used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                           | 25                                      |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |           |
| Cement type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2 bays<br>Type I fortland |                                         | -            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 /               |           |
| Quantity of bentonite used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10 pounds                 |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | NOT       |
| Quantity of calcium chloride used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 113 pourcas               |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | DRILLEL   |
| Volume of grout prepared (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | V,                | BUTTER    |
| Volume of grout used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 9 gal                     | 30                                      |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | 1.        |
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| COMMENTS: Depth to water =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 8,46 At from TOC          | * Sketch in all re                      | levant decor | nmissionina data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | . inclu           | ling:     |
| Knocked out end cap. Loaded                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                           | interval overdrill                      |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |           |
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| Added soil on top.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |           |

| WELL DECOMMISSIONING RECORD                    | -                                                            |
|------------------------------------------------|--------------------------------------------------------------|
| 1 Accet                                        | Well ID: MW4-5                                               |
| Site Name: Seneca Army Depot                   | Driller: Scott Breeds                                        |
| Site Location: SEAD                            | Inspector: Scott Dillman                                     |
| Drilling Company: G-eologic North Star         | Date: 9/17/10                                                |
|                                                | WELL SCHEMATIC*                                              |
| DECOMMISSIONING DATA                           | 2 0 (1                                                       |
| (Fill in all that apply)                       | (feet)                                                       |
|                                                | (feet) Stick up Top TO TD                                    |
| OVERDRILLING                                   | 4 Soil                                                       |
| Interval Drilled                               |                                                              |
| Drilling Method(s)  Borehole Dia. (in.)        |                                                              |
| Temporary Casing Installed? (y/n)              |                                                              |
| Depth temporary casing installed               | 5 PULLED A                                                   |
| Casing type/dia. (in.)                         | PUC P Grout                                                  |
| Method of installing                           | PULLED & Grout                                               |
| 8.                                             | ·—                                                           |
| CASING PULLING                                 | 1 10 - 11                                                    |
| Method employed Grout, Poll, Grout             |                                                              |
| Casing retrieved (feet)  Salf FF  Z'' PVC      |                                                              |
| Casing type/dia. (in.)                         |                                                              |
| THE TOP TOP A MILE.                            |                                                              |
| CASE PERFORATING                               | 15                                                           |
| Equipment used                                 |                                                              |
| Number of perforations/foot                    |                                                              |
| Size of perforations Interval perforated       |                                                              |
| interval periorated                            | 20                                                           |
| GROUTING                                       | 120                                                          |
| Interval grouted (FBLS) 1-5.964                |                                                              |
| # of batches prepared                          |                                                              |
| For each batch record:                         |                                                              |
| Quantity of water used (gal.)                  | 25                                                           |
| Quantity of cement used (lbs.) 2 5 a q 5       |                                                              |
| Cement type Type I forthead                    | Not                                                          |
| Quantity of bentonite used (lbs.)              |                                                              |
| Quantity of calcium chloride used (lbs.)       | DRIVE                                                        |
| Volume of grout used (gal.)                    | 30 -                                                         |
| Volume of grout used (gal.)                    |                                                              |
| COMMENTS: Depth to water = 7.85 ft from TOC    | * Sketch in all relevant decommissioning data, including:    |
| Knocked out end cap. Loaded casing with grout. | interval overdrilled, interval grouted, casing left in hole, |
| Piled casing. brouted remaining borehole.      | well stickup, etc.                                           |
| Added soil on top.                             |                                                              |
|                                                |                                                              |

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING REC                                                                         | CORD                                                 |          | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| San Anni Anni                                                                                    | -                                                    | Well ID: | MW4-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Mys Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Commo |
| Site Name: Seneca Army Depo                                                                      | ,                                                    |          | cott Breeds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | N. 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Site Location: SEAD - 4                                                                          |                                                      |          | Scott Dillman                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Drilling Company: G-Eologic North 5                                                              | tar                                                  |          | 117/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| DECOMMISSIONING DAT                                                                              | TA.                                                  |          | WELL SCHEMATIC*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 8,6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| (Fill in all that apply)                                                                         |                                                      | Depth    | 2,21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (2) 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                  |                                                      | (feet)   | stick up<br>Rumoved                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | TOP TO TO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| OVERDRILLING                                                                                     |                                                      | 0        | Removed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | a Soil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Interval Drilled                                                                                 |                                                      |          | <b></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 7 3011                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Drilling Method(s)                                                                               |                                                      |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Borehole Dia. (in.)                                                                              |                                                      |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Temporary Casing Installed? (y/n)                                                                |                                                      | 5        | PULLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| COMMENTS: Depth to water = 6.<br>Knocked out end cap. Loaded cas<br>Pulled casing. Growted remai | 34 ft from TOC<br>sing with grout.<br>ning borehole. |          | relevant decommissioning data, i<br>lled, interval grouted, casing left<br>c.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| Site Name: Seneca Army Dep               | no <del>†</del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Well ID:           | MW4-9                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Location: SEAD 4                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Driller:           |                              | David Lion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| Drining company. C capatre 7007 / 50     | <u> </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Date: 9            | , ,                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Temporary Casing Installed? (y/n)        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    | 1                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| CASING PULLING                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                              | 1 /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| COMMENTS: Depth to water =               | CAR TOC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Site Name: Seneca Army Dep                       | not l                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Well ID:                                | mw4-11                                     |
| Site Location: SEAD - 4                          | 701                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         | David Lion:                                |
| Drilling Company: Geologic North                 | Star                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                         | Scott Dillman                              |
| Drining Company. G-GERATE 1007 / FE              | 5 00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                         | 121/10                                     |
|                                                  | A 77 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                         | WELL SCHEMATIC*                            |
| DECOMMISSIONING D.                               | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Depth                                   | WELL SCHEMATIC                             |
| (Fill in all that apply)                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (feet)                                  | 3311113                                    |
| OVERDRILLING                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .0                                      | Rumoved Top TO TI                          |
| Interval Drilled                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         | 4- 501                                     |
| Drilling Method(s)                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         |                                            |
| Borehole Dia. (in.)                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         |                                            |
| Temporary Casing Installed? (y/n)                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         | 4                                          |
| Depth temporary casing installed                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5                                       | PULLED Growt                               |
| Casing type/dia. (in.)                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         | DUC - Growt                                |
| Method of installing                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         | WELL /                                     |
|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         | WELL                                       |
| CASING PULLING                                   | pulmosti magamenana katalanta tura talah katalan katalan katalan katalan katalan katalan katalan katalan katal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                         |                                            |
| Method employed                                  | Grout, Pull, Grait                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10                                      |                                            |
| Casing retrieved (feet)                          | 11.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                         |                                            |
| Casing type/dia. (in.)                           | 2"PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                         | / / I                                      |
| CAST PERFECT AND IS                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         |                                            |
| CASE PERFORATING                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15                                      |                                            |
| Equipment used                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         |                                            |
| Number of perforations/foot Size of perforations |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         | <b>→</b>   /                               |
| Interval perforated                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         |                                            |
| Interval perforated                              | All the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of th |                                         |                                            |
| GROUTING                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20                                      | <del> </del>  /                            |
| Interval grouted (FBLS)                          | 1-8,5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                         |                                            |
| # of batches prepared                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         |                                            |
| For each batch record:                           | the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |                                         |                                            |
| Quantity of water used (gal.)                    | 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ~                                       |                                            |
| Quantity of cement used (lbs.)                   | 2-6a95                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 25                                      |                                            |
| Cement type                                      | Type Y Portland                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         |                                            |
| Quantity of bentonite used (lbs.)                | 10 pounds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                         | Not                                        |
| Quantity of calcium chloride used (lbs.)         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         | DRILLE                                     |
| Volume of grout prepared (gal.)                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20                                      |                                            |
| Volume of grout used (gal.)                      | 8 gal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 30_                                     |                                            |
| COMPAGNITS: A                                    | 796 (12 = 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                         |                                            |
| COMMENTS: Depth to water =                       | 7.90 ft from TOC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                         | levant decommissioning data, including:    |
|                                                  | ising with grout.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | well stickup, etc.                      | ed, interval grouted, casing left in hole, |
|                                                  | ining borehole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                                            |
| Added soil in top.                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         |                                            |

| WELL DECOMMISSIONING RECORD                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| 50 10 10 10 10 10 10 10 10 10 10 10 10 10      | Well ID: N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1W4-12                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Name: Seneca Army Report                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ett Breeds                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Location: SEAD 4                          | THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | cott Dillman                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Drilling Company: Geologic North Star          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ,                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| V                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1//                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DECOMMISSIONING DATA                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | VELL SCHEMATIC*                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| (Fill in all that apply)                       | Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2.4                                   | 13.62                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | stick up<br>Removed                   | TOP TO TO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| OVERDRILLING                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Removed                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Interval Drilled                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - h-                                  | Soil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Drilling Method(s)                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Borehole Dia. (in.)                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Temporary Casing Installed? (y/n)              | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Casing type/dia. (in.)                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - DUC                                 | Grout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Method of installing                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PULLED PUC                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| CASING PULLING                                 | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |
| Method employed Grant, Pull, Grant             | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | CONTRACTOR                            | 1:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Casing retrieved (feet)                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ,                                     | Bottom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Casing type/dia. (in.)                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       | 10+                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <u>CASE PERFORATING</u>                        | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Equipment used                                 | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Number of perforations/foot                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Size of perforations                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| GROUTING                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Character Control                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Interval grouted (FBLS)                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| # of batches prepared                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Quantity of water used (gal.)                  | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of cement used (lbs.) 2-6aq5          | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       | Wildeline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Cement type Type I fortland                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of bentonite used (lbs.)              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       | NOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Quantity of calcium chloride used (lbs.)       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       | DRILLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Volume of grout prepared (gal.)                | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Volume of grout used (gal.)                    | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| COMMENTS: Bepth to water = 9.62 ft from TOC    | * Sketch in all rele                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | evant decommissioning data, inclu     | ıding:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Knocked out end cap. Loaded casing with grout. | A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA | d, interval grouted, casing left in l | iole,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Rilled casing. browted remaining borehole.     | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Added soil on top.                             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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| Volume of grout used (gal.)                                        | 6 gal              | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | - $+$ $+$ $+$                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                    | 3                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            | Person                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| COMMENTS: Depth to water =                                         | 6.84 Ft from TOC   | * Sketch in all rel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | levant decommissioning data, including:    | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |
| Knocked out end cap. Loaded co                                     | asing with grout.  | interval overdrille                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ed, interval grouted, casing left in hole, |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Pulled casing. Growted rema                                        | ining borehole.    | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -                                          | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Added soil in top.                                                 |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

Geologic North Star

Drilling Contractor

| WELL DECOMMISSIONING RECORD                                 |                                                            |
|-------------------------------------------------------------|------------------------------------------------------------|
| Site Name: Seneca Army Depot                                | Well ID: MW5-Z                                             |
| Site Location: SEAD 5                                       | Driller: Steve Larance                                     |
| Drilling Company: Geologic North Star                       | Inspector: Scott Dillman                                   |
| 7                                                           | Date: 9/24/10                                              |
| DECOMMISSIONING DATA                                        | WELL SCHEMATIC*                                            |
| (Fill in all that apply)                                    | D 2                                                        |
|                                                             | (feet)                                                     |
| OVERDRILLING                                                | O Stick up Top TO TO                                       |
| Interval Drilled                                            | 4 Soil                                                     |
| Drilling Method(s)                                          |                                                            |
| Borehole Dia. (in.)                                         |                                                            |
| Temporary Casing Installed? (y/n)                           |                                                            |
| Depth temporary casing installed                            | 5 PULLED Growt                                             |
| Casing type/dia. (in.) Method of installing                 | PVC > Growt                                                |
| ividuod of histaining                                       | WELL &                                                     |
| CASING PULLING                                              |                                                            |
| Method employed Front, Poll, Gro                            | at 10 BOTTAN                                               |
| Casing retrieved (feet)                                     | 9.4                                                        |
| Casing type/dia. (in.)                                      | - IT / WeV                                                 |
|                                                             |                                                            |
| CASE PERFORATING                                            |                                                            |
| Equipment used                                              | 15                                                         |
| Number of perforations/foot                                 |                                                            |
| Size of perforations                                        |                                                            |
| Interval perforated                                         |                                                            |
| GROUTING                                                    | 20                                                         |
| Interval grouted (FBLS)                                     |                                                            |
| # of batches prepared                                       |                                                            |
| For each batch record:                                      |                                                            |
| Quantity of water used (gal.)                               |                                                            |
| Quantity of cement used (lbs.) 2-bags                       | 25 - 1/                                                    |
| Cement type Type Y Partles                                  |                                                            |
| Quantity of bentonite used (lbs.)                           | Not                                                        |
| Quantity of calcium chloride used (lbs.)                    | DRILLED                                                    |
| Volume of grout prepared (gal.)                             |                                                            |
| Volume of grout used (gal.) 9 acl.                          | 30                                                         |
| COMMENTS: A a a // 1                                        |                                                            |
| COMMENTS: Depth to water = 6.88 ft from                     |                                                            |
| Knocked out end cap. Loaded casing with gro                 | interval overdrilled, interval grouted casing left in hole |
| Pulled casing. Growted remaining borehol Added soil on top. | e well stickup, etc.                                       |
| THE SUIT ON TOP .                                           |                                                            |
| Geologic North Star                                         |                                                            |

| WELL DECOMMISSIONING RECORD                                                 | 5.                                                                |
|-----------------------------------------------------------------------------|-------------------------------------------------------------------|
| Site Name: SENECH ARMY DEPOT                                                | Well ID: M W 1/-1                                                 |
| Site Location: 5EAN - 11                                                    | Driller: David Lions                                              |
| Drilling Company: Gedogic North Sta                                         |                                                                   |
| Drining company. Bedsale 1001 12 11-                                        |                                                                   |
|                                                                             | 11-11                                                             |
| DECOMMISSIONING DATA                                                        | WELL SCHEMATIC*                                                   |
| (Fill in all that apply)                                                    | Depth 2.8 sticky                                                  |
| OVERDRILLING                                                                | De uniel loi                                                      |
| Interval Drilled                                                            |                                                                   |
| Drilling Method(s)                                                          | 16.6                                                              |
| Borehole Dia. (in.)                                                         | <del>-</del>                                                      |
| Temporary Casing Installed? (y/n)                                           | 11 11                                                             |
| Depth temporary casing installed                                            | - 5 - 11, 1                                                       |
| Casing type/dia. (in.)                                                      | - Grow                                                            |
| Method of installing                                                        |                                                                   |
| Tradition of minuming                                                       | 72/10/2                                                           |
| CASING PULLING                                                              |                                                                   |
| Method employed                                                             | ill growt 10 = "                                                  |
| Casing retrieved (feet)                                                     | 4.77                                                              |
| Casing type/dia. (in.)                                                      | Z PVC                                                             |
|                                                                             |                                                                   |
| CASE PERFORATING                                                            | cusing 1                                                          |
| Equipment used                                                              | 15 = (a) 1 13.8 ft                                                |
| Number of perforations/foot                                                 |                                                                   |
| Size of perforations                                                        |                                                                   |
| Interval perforated                                                         |                                                                   |
| CROUTING                                                                    |                                                                   |
| GROUTING                                                                    | NOT NOT                                                           |
| Interval grouted (FBLS)                                                     | 1 1                                                               |
| # of batches prepared For each batch record:                                | DATILE                                                            |
| Quantity of water used (gal.)                                               | <b>¬</b>   <i>-</i>    /                                          |
| Quantity of water used (gal.)  Quantity of cement used (lbs.)  Zba//        | - 1 - 1/1 1                                                       |
| Cement type Type Po                                                         |                                                                   |
| Quantity of bentonite used (lbs.)                                           |                                                                   |
| Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.) | 100ml 5                                                           |
| Volume of grout prepared (gal.)                                             | <b>-</b>                                                          |
| Volume of grout used (gal.)                                                 | -                                                                 |
| 0                                                                           |                                                                   |
| COMMENTS: Apoth to water = 4.61                                             | Ft. fm C * Sketch in all relevant decommissioning data, including |
| Knocked but end slug: Loaded casing                                         |                                                                   |
| grant. Pulled caking. Topled off WI                                         | well stickup, etc.                                                |
| Sorout. Recovered at casina                                                 |                                                                   |
|                                                                             |                                                                   |
| Geologic North Star                                                         |                                                                   |
| Drilling Contractor                                                         | Department Representative                                         |

| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Well ID: MW 1(-2                                                                                                                          |
| Site Location: SEAD (                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Driller:                                                                                                                                  |
| Drilling Company:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Inspector:                                                                                                                                |
| Dining company,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Date:                                                                                                                                     |
| DECOMMISSIONING DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | WELL SCHEMATIC*                                                                                                                           |
| (Fill in all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Depth (feet) SU=38                                                                                                                        |
| OVERDRILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (feet)                                                                                                                                    |
| Interval Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                           |
| Drilling Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                           |
| Borehole Dia. (in.) Temporary Casing Installed? (y/n)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                           |
| Depth temporary casing installed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                           |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                           |
| Method of installing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                           |
| lytethod of histarning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                           |
| CASING PULLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                           |
| Method employed Pull                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                           |
| Casing retrieved (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                           |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                           |
| CASE PERFORATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                           |
| Equipment used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                           |
| Number of perforations/foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                           |
| Size of perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                           |
| Interval perforated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                           |
| GROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                           |
| Interval grouted (FBLS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                           |
| # of batches prepared                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | _                                                                                                                                         |
| For each batch record:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                           |
| Quantity of water used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                           |
| Quantity of cement used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ——————————————————————————————————————                                                                                                    |
| Cement type  Powerland #   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Powerland   Pow | <u> </u>                                                                                                                                  |
| Quantity of bentonite used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                           |
| Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                           |
| Volume of grout prepared (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                           |
| votatile of grout used (gail.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                           |
| COMMENTS:  Knock at ent dy tremnte grat  Pull Rises & pric top offgrut                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |

Drilling Contractor

Department Representative

1 Probable cosing 1 Cosing pulled 3Bollards

127 B-5 W Z3

| WELL DECOMMISSIONING                                                                      | RECORD             | -                   |                                            |
|-------------------------------------------------------------------------------------------|--------------------|---------------------|--------------------------------------------|
| Site Name: Seneca Army A                                                                  | epot               | Well ID:            | MW11-3                                     |
| Site Location: SEAD                                                                       |                    | Driller:            | - David Lion                               |
| Drilling Company: Geologic North                                                          | 1 Star             | Inspector:          | Scott Dillman                              |
| , J                                                                                       |                    | Date: 9             | 2 / 2                                      |
| DECOMMISSIONING                                                                           | DATA               |                     | WELL SCHEMATIC*                            |
| (Fill in all that app                                                                     |                    | Depth               | 7/1                                        |
| (2 111 111 111 111 111 111                                                                | -77                | (feet)              | Brokey -> 1.9                              |
| OVERDRILLING                                                                              |                    | 0                   | Stick up Top TO TD                         |
| Interval Drilled                                                                          |                    |                     | 4- 501                                     |
| Drilling Method(s)                                                                        |                    |                     |                                            |
| Borehole Dia. (in.)                                                                       |                    |                     |                                            |
| Temporary Casing Installed? (y/n)                                                         |                    | _                   |                                            |
| Depth temporary casing installed                                                          |                    | _ 5                 | PULLED                                     |
| Casing type/dia. (in.)                                                                    |                    |                     | - PUC - Growt                              |
| Method of installing                                                                      |                    |                     | - WELL E                                   |
| CAGDIO DATA DIO                                                                           |                    |                     | Button                                     |
| CASING PULLING                                                                            |                    | 10                  | 106                                        |
| Method employed                                                                           | Grant, Pull, Grait | 10                  | / well                                     |
| Casing retrieved (feet)                                                                   | 7,4 ++             |                     |                                            |
| Casing type/dia. (in.)                                                                    | 2"PVC              |                     | /                                          |
| CASE PERFORATING                                                                          |                    |                     | <u> </u>                                   |
| Equipment used                                                                            |                    | 15                  | /                                          |
| Number of perforations/foot                                                               |                    | -                   | <b>-</b>    /                              |
| Size of perforations                                                                      |                    |                     | <u> </u>                                   |
| Interval perforated                                                                       |                    |                     |                                            |
|                                                                                           |                    | 7.0                 | <del>-</del>                               |
| GROUTING                                                                                  |                    | 20                  | -    /                                     |
| Interval grouted (FBLS)                                                                   | 1-7.44             |                     |                                            |
| # of batches prepared                                                                     | 1                  |                     | -                                          |
| For each batch record:                                                                    |                    |                     |                                            |
| Quantity of water used (gal.)                                                             | 18                 | ~ ~~                |                                            |
| Quantity of cement used (lbs.)                                                            | 2-6ag5             | 25                  |                                            |
| Cement type                                                                               | Type Y Portland    |                     |                                            |
| Quantity of bentonite used (lbs.)                                                         | 10 pounds          |                     | Not                                        |
| Quantity of calcium chloride used (lbs.)                                                  |                    |                     | DRILLED                                    |
| Volume of grout prepared (gal.)                                                           |                    | 30                  |                                            |
| Volume of grout used (gal.)                                                               | 790L               | 30                  |                                            |
| COMMENTS: Death to water =                                                                | NA Ft fame TOC     |                     |                                            |
|                                                                                           | 17 21 0787 1 0     | * Sketch in all rel | evant decommissioning data, including:     |
| Knocked out end cap. Loaded casing with grout. Pulled casing. Growted remaining borehole. |                    | well stickup, etc.  | ed, interval grouted, casing left in hole, |
| Added soil on top.                                                                        | aining vorengle.   |                     |                                            |
| TOTAL SOLITON 108                                                                         |                    |                     |                                            |

Geologic North Star

**Drilling Contractor** 

| WELL DECOMMISSIONING RECORD                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name                                             | Well ID: MW ( -4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Site Name:                                            | Driller:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Site Location:                                        | Inspector:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Drilling Company:                                     | Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| DECOMMISSIONING DATA                                  | Depth WELL SCHEMATIC*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| (Fill in all that apply)                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                       | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| OVERDRILLING                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Interval Drilled                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Drilling Method(s)                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Borehole Dia. (in.) Temporary Casing Installed? (y/n) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Depth temporary casing installed                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Casing type/dia. (in.) Method of installing           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Internod of histathing                                | '   -   1     1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| CASING PULLING                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Method employed 13FF.                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Casing retrieved (feet)                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Casing type/dia. (in.)                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                       | .   -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| CASE PERFORATING                                      | $_{1}$   6 $\Rightarrow$  /  $\rightarrow$ \lambda \lambda \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \c |
| Equipment used                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Number of perforations/foot                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Size of perforations                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Interval perforated                                   | 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| GROUTING                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Interval grouted (FBLS)                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| # of batches prepared                                 | ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| For each batch record:                                | ,   , _   /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Quantity of water used (gal.)                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Quantity of cement used (lbs.)                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Cement type                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Quantity of bentonite used (lbs.)                     | ↓                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Quantity of calcium chloride used (lbs.)              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Volume of grout prepared (gal.)                       | + $+$ $+$ $+$ $+$ $+$ $+$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Volume of grout used (gal.)                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                       | 34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| COMMENTS:                                             | * Sketch in all relevant decommissioning data, including:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Knock out end cap, tremule grant, pull Pl             | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Top of growt Remove Bolled's 4 cones                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Drilling Contractor

Department Representative

13·0 10·5

Cash pulled

| WELL DECOMMISSIONING                     | RECORD            |                                                   | ,                                        |
|------------------------------------------|-------------------|---------------------------------------------------|------------------------------------------|
|                                          |                   | Well ID: MW (                                     | 11-,5                                    |
| Site Name: Construction Dearts           | 4                 | Driller:                                          |                                          |
| Site Location: SEAD-U                    |                   |                                                   |                                          |
| Drilling Company: Geo gre Ns             |                   | Inspector:                                        |                                          |
| U                                        |                   | Date:                                             |                                          |
| DECOMMISSIONING                          | DATA              | 1                                                 | SCHEMATIC*                               |
| (Fill in all that app                    | oly)              | Depth                                             | 1 (50)                                   |
|                                          |                   | (feet)                                            | / <sup>50</sup> 25                       |
| <u>OVERDRILLING</u>                      |                   | 0                                                 | /                                        |
| Interval Drilled                         |                   |                                                   | 1 1 1                                    |
| Drilling Method(s)                       |                   |                                                   | <u> </u>                                 |
| Borehole Dia. (in.)                      |                   |                                                   | -   /  /                                 |
| Temporary Casing Installed? (y/n)        |                   | 2 -                                               | -                                        |
| Depth temporary casing installed         |                   |                                                   | -                                        |
| Casing type/dia. (in.)                   |                   |                                                   | -                                        |
| Method of installing                     |                   |                                                   | -                                        |
|                                          |                   |                                                   | -                                        |
| CASING PULLING                           | Dulled            | 1 9 -                                             | $\dashv$ $\mid$ $\mid$ $\mid$            |
| Method employed                          | 10/10             |                                                   | -                                        |
| Casing retrieved (feet)                  | 2ª pvc            |                                                   | -      \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ |
| Casing type/dia. (in.)                   | 2 000             |                                                   | -     <i>         </i>                   |
| CASE PERFORATING                         |                   |                                                   | -                                        |
| Equipment used                           |                   | 6                                                 | ┦  / \                                   |
| Number of perforations/foot              |                   |                                                   | 7 / 1\ 1                                 |
| Size of perforations                     |                   |                                                   | -                                        |
| Interval perforated                      |                   |                                                   | -     \                                  |
| Interval perforaced                      |                   | 6                                                 | 7   /  \                                 |
| GROUTING                                 |                   | 0                                                 | 7 ////                                   |
| Interval grouted (FBLS)                  |                   |                                                   | 7 1 1 1 1                                |
| # of batches prepared                    |                   |                                                   |                                          |
| For each batch record:                   |                   | 1                                                 |                                          |
| Quantity of water used (gal.)            | 18                | 10                                                |                                          |
| Quantity of cement used (lbs.)           | 180 lbs           |                                                   |                                          |
| Cement type                              | Pointien#1        |                                                   |                                          |
| Quantity of bentonite used (lbs.)        | 10/65             |                                                   | _                                        |
| Quantity of calcium chloride used (lbs.) |                   |                                                   | <b>-</b>                                 |
| Volume of grout prepared (gal.)          |                   | 12                                                | _    T                                   |
| Volume of grout used (gal.)              | logations         |                                                   |                                          |
|                                          | V                 | ٦                                                 |                                          |
| COMMENTS:                                |                   | -                                                 | ecommissioning data, including:          |
| Knock out end cop , Themme               |                   | interval overdrilled, inter<br>well stickup, etc. | val grouted, casing left in hole,        |
| Top of grout, lenne bolle                | rds, concele puil | - Men streatup, etc.                              |                                          |
| I BACKLUIT                               |                   |                                                   |                                          |

Drilling Contractor

Department Representative

Costy pulled

11 Ft total

| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Name: Seneca Army Depot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Well ID: MW//-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Location: SEAD //                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Driller: David Lion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Drilling Company: G-eclogic North Star                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Inspector: Scott Dillman                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Date: 9/21/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| Knocked out end cap. Loaded casing with grout.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | interval overdrilled, interval grouted, casing left in hole,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING F                      | RECORD             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •                                          |
|---------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Site Name: Seneca Army De                   | · oot              | Well ID:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MW11-7                                     |
| Site Location: SEAD                         | F-22-              | Driller:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | - David Lion                               |
| Drilling Company: G-Cologic North           | Star               | Inspector:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Scott Dillman                              |
|                                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4 1                                        |
| DECOMMISSIONING                             | DATA               | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s | WEIL SCHEMATIC*                            |
| (Fill in all that appl                      | 1                  | Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2,24, 7.6ft                                |
| (cursus survey)                             | ,                  | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                            |
| OVERDRILLING                                |                    | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | stick up Top To To                         |
| Interval Drilled                            |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4 Soil                                     |
| Drilling Method(s)                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Borehole Dia. (in.)                         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Temporary Casing Installed? (y/n)           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Depth temporary casing installed            |                    | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | PULLED                                     |
| Casing type/dia. (in.)                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DUC 7 Growt                                |
| Method of installing                        |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PULLED Growt                               |
| GAGRIG WILL RIG                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| CASING PULLING                              | <u> </u>           | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |
| Method employed                             | Grout, Pull, Grait |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Casing retrieved (feet)                     | 2" PVG             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <del></del>                                |
| Casing type/dia. (in.)                      | 12 rvc             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | //                                         |
| CASE PERFORATING                            |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Equipment used                              |                    | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | - 1/1                                      |
| Number of perforations/foot                 |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Size of perforations                        |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <u> </u>                                   |
| Interval perforated                         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -    /                                     |
|                                             |                    | <b>7</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                            |
| GROUTING                                    |                    | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |
| Interval grouted (FBLS)                     | 1-5.4              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| # of batches prepared                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| For each batch record:                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Quantity of water used (gal.)               | 18                 | ~ /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                            |
| Quantity of cement used (lbs.)              | 2 5ag 5            | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |
| Cement type                                 | Type Y Portland    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Quantity of bentonite used (lbs.)           | 18 pounds          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Not                                        |
| Quantity of calcium chloride used (lbs.)    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DRILLE                                     |
| Volume of grout prepared (gal.)             |                    | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |
| Volume of grout used (gal.)                 | 5gel               | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |
| COMMENTS: Agaila to the                     | 71500 ==1          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| COMMENTS: Depth to water = 7.15 ft from TOC |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | levant decommissioning data, including:    |
|                                             | casing with grout. | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ed, interval grouted, casing left in hole, |
|                                             | aining borehole.   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Added soil on top.                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |

Geologic North Star

| WELL DECOMMISSIONING RECORD                  |                                                              |
|----------------------------------------------|--------------------------------------------------------------|
| Site Name: SENECH ARMY DEPOT                 | Well ID: MW/ZeAZ                                             |
| Site Location: $5 \in A \setminus 12$        | Driller: Scott Breads                                        |
|                                              | Inspector: 3 cott Dillman                                    |
| Drilling Company: Geologic North Star        | Date: 9/14/10                                                |
|                                              |                                                              |
| DECOMMISSIONING DATA                         | WELL SCHEMATIC*                                              |
| (Fill in all that apply)                     | Depth sticked TA from                                        |
| OVERDRILLING                                 | (feet) ~ 1 ft ~ 13 from                                      |
| Interval Drilled                             |                                                              |
| Drilling Method(s)                           |                                                              |
| Borehole Dia. (in.)                          |                                                              |
| Temporary Casing Installed? (y/n)            |                                                              |
| Depth temporary casing installed             | 5       6101                                                 |
| Casing type/dia. (in.)                       |                                                              |
| Method of installing                         | pulled 1                                                     |
|                                              | PVC-T                                                        |
| CASING PULLING                               | // //                                                        |
| Method employed Groat Pull Carport           |                                                              |
| Casing retrieved (feet) $13^{\prime} f + 1$  |                                                              |
| Casing type/dia. (in.)                       |                                                              |
|                                              | Bostom                                                       |
| CASE PERFORATING                             | 15 - 1/1 05,                                                 |
| Equipment used                               | 15 Jett                                                      |
| Number of perforations/foot                  | <u> </u>                                                     |
| Size of perforations                         |                                                              |
| Interval perforated                          |                                                              |
| GROUTING                                     | /NoT                                                         |
| Interval grouted (FBLS)                      |                                                              |
| # of batches prepared                        | - DRILLE                                                     |
| For each batch record:                       |                                                              |
| Quantity of water used (gal.)                |                                                              |
| Quantity of cement used (lbs.)               |                                                              |
| Cement type Type I Partland                  |                                                              |
| Quantity of bentonite used (lbs.)            |                                                              |
| Quantity of calcium chloride used (lbs.)     |                                                              |
| Volume of grout prepared (gal.)              |                                                              |
| Volume of grout used (gal.)                  |                                                              |
| COMMENTS: Nepth to water 8,28 feet from Tox  | * Sketch in all relevant decommissioning data, including:    |
| Knocked off and cap. Transie growted casing. | interval overdrilled, interval grouted, casing left in hole, |
| Pulled Casing. Tiemie brouted remaining      | well stickup, etc.                                           |
| horehole. To pred off reper Bole with Soil.  |                                                              |

Drilling Contractor

Department Representative

Note: MW12-11 was thought to be at this locations. MW12-11 and MW12A-02 coordinates were within a few feet of each other, but only a single well was physically located during the Site Walk. Upon opening lid of casing, it was determined at the well was in fact MW12A-02.

| WELL DECOMMISSIONING RE                       | CORD                |                 |                                                 |
|-----------------------------------------------|---------------------|-----------------|-------------------------------------------------|
|                                               |                     |                 | A                                               |
| Site Name: SENECA ARMY                        | DEPOT               | Well ID:        | MU12-14-3                                       |
| Site Location: 3EAD 12                        |                     | Driller:        | Switt Breads                                    |
| Drilling Company: (realogic North             | Star                | Inspector:      | Scott Willman                                   |
|                                               |                     | Date:           | 9/14/10                                         |
| DECOMMISSIONING DA                            | TA                  |                 | WELL SCHEMATIC*                                 |
| (Fill in all that apply)                      |                     | Depth           | WELL SCHEMATIC*  1.9 Shelluf werthough          |
| , , , , , ,                                   |                     | (feet)          | 16.9                                            |
| <u>OVERDRILLING</u>                           |                     | -0              |                                                 |
| Interval Drilled                              |                     |                 | 50:1                                            |
| Drilling Method(s)                            |                     |                 | (                                               |
| Borehole Dia. (in.)                           |                     |                 | - 1 11 1/ 1                                     |
| Temporary Casing Installed? (y/n)             |                     | 5               | <del> </del>                                    |
| Depth temporary casing installed              |                     |                 |                                                 |
| Casing type/dia. (in.)                        |                     |                 | - 1010 124                                      |
| Method of installing                          |                     |                 | - Puled                                         |
| CASING PULLING                                |                     |                 | 100 -1                                          |
| Method employed                               | Grant Pull Grant    | 10              | casing                                          |
| Casing retrieved (feet)                       | 110,4ft.            |                 |                                                 |
| Casing type/dia. (in.)                        | 2' PVC              |                 |                                                 |
| Cusing type, and (m.)                         |                     |                 |                                                 |
| CASE PERFORATING                              |                     | 1               |                                                 |
| Equipment used                                |                     | 13              | Bottone                                         |
| Number of perforations/foot                   |                     |                 | 1 3 6                                           |
| Size of perforations                          |                     |                 | _ Well                                          |
| Interval perforated                           |                     |                 |                                                 |
|                                               |                     | 20              | - $1/1$ $1$                                     |
| GROUTING                                      | 1 47 6 0            |                 | // /                                            |
| Interval grouted (FBLS)                       | 1-14.954            |                 | $ V_{\perp}$ $\perp$                            |
| # of batches prepared                         |                     |                 | - Not                                           |
| For each batch record:                        | a                   |                 | Drilled                                         |
| Quantity of water used (gal.)                 |                     |                 |                                                 |
| Quantity of cement used (lbs.)                | Type I Pertland     |                 |                                                 |
| Cement type Quantity of bentonite used (lbs.) | 19,10 - 10 - 110 00 |                 | - $1/1$ $1$                                     |
| Quantity of calcium chloride used (lbs.)      |                     |                 | -                                               |
| Volume of grout prepared (gal.)               |                     |                 |                                                 |
| Volume of grout used (gal.)                   |                     |                 |                                                 |
|                                               | ,                   |                 |                                                 |
| COMMENTS: Death to writer to                  | 9,54 TOC            | * Sketch in al  | l relevant decommissioning data, including:     |
| Knockedout end cap. Tren.                     | o growted cosing.   |                 | Irilled, interval grouted, casing left in hole, |
| Pulled casing. Theme gr                       | ated remaining      | well stickup,   | etc.                                            |
| hole. Topsel off hole wit                     | h 501.              |                 |                                                 |
| 1. 1. Ston                                    | ~                   |                 |                                                 |
| brologie North 114                            | ·                   | Department Repr | ecentative                                      |
| Drilling Contractor                           |                     | Бераганені Кері | oonaire                                         |

### WELL DECOMMISSIONING RECORD MW12-B1 Well ID: Site Name: Driller: Site Location: Inspector: Drilling Company: Date: 9113110 WELL SCHEMATIC\* **DECOMMISSIONING DATA** Depth (Fill in all that apply) 9 tick-p1.2 (feet) **OVERDRILLING** Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing Pulled CASING PULLING 10 Method employed Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated well GROUTING TD Interval grouted (FBLS) # of batches prepared For each batch record: DOT Quantity of water used (gal.) SRILLES Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.) \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Stat

Drilling Contractor

| WELL DECOMMISSIONING                        | G RECORD            | ·                                          |                               | ,              |  |
|---------------------------------------------|---------------------|--------------------------------------------|-------------------------------|----------------|--|
| Site Name: SENECA ARMY DE                   | POT                 | Well ID:                                   | MW-12-B                       | 3              |  |
| Site Location: SEAN 12                      |                     |                                            | 1/ 0 1                        |                |  |
|                                             | th Star             | Inspector:                                 | cott Breeds                   |                |  |
| 3.5                                         | 11000               |                                            | Scott Dillma                  |                |  |
| DECOMMISSIONIN                              | IG DATA             |                                            | 7                             |                |  |
| (Fill in all that a                         |                     |                                            | WELL SCHEMATIC*               |                |  |
| (1 m m m mar a                              | ppiy)               | Depth<br>(feet)                            | 1.9                           | 1 1 70         |  |
| <u>OVERDRILLING</u>                         |                     | (lect)                                     | Still-P<br>Remove             | 1 16++.        |  |
| Interval Drilled                            |                     |                                            | ste more                      | 1              |  |
| Drilling Method(s)                          |                     |                                            |                               | S - 5011       |  |
| Borehole Dia. (in.)                         |                     |                                            |                               | 11 11          |  |
| Temporary Casing Installed? (y/n)           |                     |                                            |                               |                |  |
| Depth temporary casing installed            |                     | 1 5                                        |                               |                |  |
| Casing type/dia. (in.)                      |                     |                                            | Puled                         | Grout          |  |
| Method of installing                        |                     |                                            | 100                           | & Backfill     |  |
| CASING DULLING                              |                     |                                            | welling.                      | 2 Dacquill     |  |
| <u>CASING PULLING</u> Method employed       |                     | 10                                         | welling.                      |                |  |
| Casing retrieved (feet)                     | Grout Pail Grat     | 10                                         | Carl                          | \              |  |
| Casing type/dia. (in.)                      | 2" PVC              |                                            |                               |                |  |
| caonig typerata. (III.)                     | 2 700               |                                            |                               |                |  |
| CASE PERFORATING                            |                     |                                            |                               |                |  |
| Equipment used                              |                     | 15                                         |                               | Bottem of Well |  |
| Number of perforations/foot                 |                     |                                            |                               | 1 2, 000,      |  |
| Size of perforations                        |                     |                                            |                               |                |  |
| Interval perforated                         |                     |                                            |                               |                |  |
| GROUTING                                    |                     |                                            |                               |                |  |
| Interval grouted (FBLS)                     | 1 1 111             |                                            |                               |                |  |
| # of batches prepared                       | <del>40</del> ,1-14 |                                            |                               | Not            |  |
| For each batch record:                      | И                   |                                            |                               | Drilled        |  |
| Quantity of water used (gal.)               | 18                  |                                            |                               | 1/1            |  |
| Quantity of cement used (lbs.)              | 2 5495              |                                            |                               | VA = I         |  |
| Cement type                                 | Type I for then     |                                            |                               | 1'/            |  |
| Quantity of bentonite used (lbs.)           | 10 Parade           |                                            |                               |                |  |
| Quantity of calcium chloride used (lbs.)    | 1                   |                                            |                               |                |  |
| Volume of grout prepared (gal.)             |                     |                                            |                               |                |  |
| Volume of grout used (gal.)                 | 1399                |                                            | -                             |                |  |
| COMMENTS: Death to water                    | 13 10/2 = 7         |                                            |                               |                |  |
| 1/ / 0 / 1                                  | 12.05 From TOC.     | * Sketch in all rele                       | vant decommissioning data     | a, including:  |  |
| Knocked out end plug. Treme granted casing. |                     | interval overdrilled<br>well stickup, etc. | d, interval grouted, casing l | eft in hole,   |  |
| boring. Added Soil above area               |                     | wen stickup, efc.                          |                               | 1              |  |
| boring. Added soil obove gran               | ~                   |                                            |                               |                |  |

| WELL DECOMMISSIONING                                          | RECORD             |                      | •                                         |
|---------------------------------------------------------------|--------------------|----------------------|-------------------------------------------|
| Site Name: Seneca Army Depo                                   | <del></del>        | Well ID:             | MW12-B3                                   |
|                                                               | ad 17              |                      | sept Breeds                               |
|                                                               | -th star           |                      | scott Millman                             |
| 0 0010312 1-07                                                | 70,25              | Date: 9/             | 13/10                                     |
| DECOMMISSIONING                                               | C DATA             |                      |                                           |
| (Fill in all that ap                                          |                    |                      | WELL SCHEMATIC*                           |
| (1 III III all that app                                       | pry)               | Depth<br>(feet)      | 1.5 Stide 1 16                            |
| OVERDRILLING                                                  |                    | (leet)               | 1.5 sticked 16<br>Removed TD from         |
| Interval Drilled                                              |                    |                      | - Toc                                     |
| Drilling Method(s)                                            |                    |                      |                                           |
| Borehole Dia. (in.)                                           |                    |                      | — ) [·]                                   |
| Temporary Casing Installed? (y/n)                             |                    |                      |                                           |
| Depth temporary casing installed                              |                    | 5                    | 0.1100                                    |
| Casing type/dia. (in.)                                        |                    |                      | Pulled Grout                              |
| Method of installing                                          |                    |                      | W. Et budefill                            |
|                                                               |                    |                      | (as it's)                                 |
| CASING PULLING                                                |                    |                      |                                           |
| Method employed                                               | Grout Pull, Grout  | 10                   |                                           |
| Casing retrieved (feet)                                       | 16 f+              |                      |                                           |
| Casing type/dia. (in.)                                        | Z' PVC             |                      |                                           |
| CASE PERFORATING                                              |                    |                      |                                           |
| Equipment used                                                |                    | 15                   | Bottom                                    |
| Number of perforations/foot                                   |                    |                      | of well                                   |
| Size of perforations                                          |                    |                      | <del>-</del>                              |
| Interval perforated                                           |                    |                      |                                           |
|                                                               |                    |                      |                                           |
| GROUTING                                                      |                    |                      | Drilled prilled                           |
| Interval grouted (FBLS)                                       | 1-14ft.            |                      | - Briller                                 |
| # of batches prepared                                         |                    |                      |                                           |
| For each batch record: Quantity of water used (gal.)          |                    |                      |                                           |
| Quantity of water used (gal.)  Quantity of cement used (lbs.) | 18                 |                      |                                           |
| Cement type                                                   | 2 5ags             |                      |                                           |
| Quantity of bentonite used (lbs.)                             | Partland Type 1    |                      | _ / _                                     |
| Quantity of calcium chloride used (lbs.)                      | 10 posseds         |                      |                                           |
| Volume of grout prepared (gal.)                               |                    |                      |                                           |
| Volume of grout used (gal.)                                   | 10 [               |                      |                                           |
| <u> </u>                                                      | 19 gal             | J                    |                                           |
| COMMENTS: Lepth to water 12,2                                 | from TOC.          | * Sketch in all role | evant decommissioning data, including:    |
|                                                               | routed casing with | interval overdrilled | d, interval grouted, casing left in hole, |
| grout. Pulled casing. Tremis                                  | grouted remaining  | well stickup, etc.   | ,                                         |
| Soring . Added soil above grow                                | U 1                |                      |                                           |
| )                                                             |                    |                      |                                           |

Drilling Contractor

| WELL DECOMMISSIONING RECORD                                       | •                                                                               |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Site Name: 5 eneca Army Depot                                     | Well ID: M 23/2-01                                                              |
|                                                                   | Driller: Scott Breeds                                                           |
| Site Location: SEAD 12                                            | Inspector: 5 to H Dillman                                                       |
| Drilling Company: Geologic North Star                             | Date: 9/15//0                                                                   |
|                                                                   |                                                                                 |
| DECOMMISSIONING DATA                                              | WELL SCHEMATIC*                                                                 |
| (Fill in all that apply)                                          | Depth (foot)                                                                    |
| OVERDANA DIG                                                      | (feet) Zing To To                                                               |
| OVERDRILLING                                                      | 501                                                                             |
| Interval Drilled                                                  |                                                                                 |
| Drilling Method(s) Borehole Dia. (in.)                            |                                                                                 |
| Temporary Casing Installed? (y/n)                                 |                                                                                 |
| Depth temporary casing installed                                  | 5 polled front                                                                  |
| Casing type/dia. (in.)                                            | - puc                                                                           |
| Method of installing                                              | well.                                                                           |
|                                                                   | we'r                                                                            |
| CASING PULLING                                                    | Bottom                                                                          |
| Method employed broat full, broat                                 | 10 Bollon                                                                       |
| Casing retrieved (feet)                                           | - Well                                                                          |
| Casing type/dia. (in.)                                            | <u> </u>                                                                        |
|                                                                   | - $1/1$                                                                         |
| CASE PERFORATING                                                  |                                                                                 |
| Equipment used                                                    |                                                                                 |
| Number of perforations/foot                                       |                                                                                 |
| Size of perforations                                              |                                                                                 |
| Interval perforated                                               |                                                                                 |
| CROLITING                                                         | Not                                                                             |
| GROUTING Interval grouted (FBLS)                                  | DRIVES                                                                          |
| Interval grouted (FBLS) # of batches prepared                     |                                                                                 |
| For each batch record:                                            |                                                                                 |
| Quantity of water used (gal.)                                     |                                                                                 |
| Quantity of cement used (lbs.)                                    |                                                                                 |
|                                                                   |                                                                                 |
| Cement type Quantity of bentonite used (lbs.)  Type 1  10 och des |                                                                                 |
| Quantity of calcium chloride used (lbs.)                          |                                                                                 |
| Volume of grout prepared (gal.)                                   |                                                                                 |
| Volume of grout used (gal.)                                       |                                                                                 |
|                                                                   | 1                                                                               |
| COMMENTS: beoth to water = 9.02 ft from TOC                       |                                                                                 |
| Knocked out and cap. Leaded casing with grout.                    | interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |
| fulled casing browted venaining boring.                           | non stickup, etc.                                                               |
| Added soil for top.                                               |                                                                                 |

Cologic North Star,
Drilling Contractor

| WELL DECOMMISSIONING R                                                   | ECORD              |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
|--------------------------------------------------------------------------|--------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Site Name: Sanas Arman Non-                                              | +                  | Well ID:           | MW/2-03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |
| Site Name: Seneca Army Department Site Location: 5 EAD 12                |                    |                    | att Breeds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |
| Site Location: SEMINIC                                                   | 7. 5+2-            |                    | Scott Dillmar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | \            |
| Drilling Company: 1-cologic Nort                                         | n )101             | Date: 9            | 15/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |
|                                                                          |                    |                    | WELL SCHEMATIC*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| DECOMMISSIONING I                                                        |                    | Depth              | Removed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | m ( D)       |
| (Fill in all that apply                                                  | ')                 | (feet)             | 2.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 18.6Ft       |
| OT TO DO IT IN INC.                                                      |                    | (leet)             | STICKUP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TOP TO       |
| OVERDRILLING                                                             |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 61 5011      |
| Interval Drilled                                                         |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| Drilling Method(s) Borehole Dia. (in.)                                   |                    |                    | Pulled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Grant        |
| Temporary Casing Installed? (y/n)                                        |                    |                    | T Vall                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4            |
| Depth temporary casing installed                                         |                    | 5                  | PUL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | - The second |
| Casing type/dia. (in.)                                                   |                    |                    | - well 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Potter       |
| Method of installing                                                     |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | of           |
|                                                                          |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Well         |
| CASING PULLING                                                           | 2 6 0 1/4 1        | 10                 | <del> </del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | /   ""       |
| Method employed                                                          | Grant, Pull, Grant |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| Casing retrieved (feet)                                                  | 8.6 Ft             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| Casing type/dia. (in.)                                                   | Z" PVC             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | /            |
| CACE DEDECT ATING                                                        |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | /            |
| CASE PERFORATING Equipment used                                          |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | MOT          |
| Number of perforations/foot                                              |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Drilled      |
| Size of perforations                                                     |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dittieu      |
| Interval perforated                                                      |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| more year personal and                                                   |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| GROUTING                                                                 |                    |                    | Carrier Comme                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |
| Interval grouted (FBLS)                                                  | 1-6ft              |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| # of batches prepared                                                    |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | · . I        |
| For each batch record:                                                   |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | /            |
| Quantity of water used (gal.)                                            | 18                 |                    | <u> </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |
| Quantity of cement used (lbs.)                                           | 25045              |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| Cement type                                                              | Type I Portland    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| Quantity of bentonite used (lbs.)                                        | 10 founds          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| Volume of grout used (gal.)                                              | 8 ga (             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | /            |
| , oranie or grout about (gain)                                           | 0 9101             | I                  | CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION OF THE CONCENSION O |              |
| COMMENTS: Depth to water                                                 | 192 7.75 ft. TX    |                    | levant decommissioning data,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |
| Knocked out end cap. Loaded                                              | casing with great. | 1                  | ed, interval grouted, casing lef                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | t in hole,   |
|                                                                          | airing buring.     | well stickup, etc. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| Transpoll with Soil                                                      |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |

beologic North Star.

| WELL DECOMMISSIONING RECORD                                   |                                                                                                                        |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| - A - A - A - A                                               | Well ID: MW12-03-                                                                                                      |
| Site Name: Seneca Homa Depot                                  | Driller: Steve Laramel                                                                                                 |
| Site Location: SEAN 12                                        | Inspector: Sept Dillman                                                                                                |
| Drilling Company: Goologic North Star                         |                                                                                                                        |
| J                                                             | Date. 1175                                                                                                             |
| DECOMMISSIONING DATA                                          | WELL SCHEMATIC*  Depth  Tof to                                                                                         |
| (Fill in all that apply)                                      | Stier                                                                                                                  |
|                                                               | (feet) 255 Compled 20.4                                                                                                |
| OVERDRILLING                                                  | 1 - 501                                                                                                                |
| Interval Drilled                                              |                                                                                                                        |
| Drilling Method(s)                                            |                                                                                                                        |
| Borehole Dia. (in.)                                           |                                                                                                                        |
| Temporary Casing Installed? (y/n)                             | 5 Grost                                                                                                                |
| Depth temporary casing installed                              | P.Med I Town                                                                                                           |
| Casing type/dia. (in.) Method of installing                   |                                                                                                                        |
| Method of installing                                          | 3, 134                                                                                                                 |
| CASING PULLING                                                |                                                                                                                        |
| Method employed                                               | il. Grat 10 41 b                                                                                                       |
| Casing retrieved (feet)                                       |                                                                                                                        |
| Casing type/dia. (in.)                                        | = Giout                                                                                                                |
|                                                               | - C.11ed                                                                                                               |
| CASE PERFORATING                                              | - Screen                                                                                                               |
| Equipment used                                                |                                                                                                                        |
| Number of perforations/foot                                   |                                                                                                                        |
| Size of perforations                                          |                                                                                                                        |
| Interval perforated                                           | Bottom of                                                                                                              |
|                                                               | 20 - Well                                                                                                              |
| GROUTING Interval grouted (FBLS)                              |                                                                                                                        |
| Interval grouted (1225)                                       |                                                                                                                        |
| # of batches prepared                                         |                                                                                                                        |
| For each batch record: Quantity of water used (gal.)          | -   Not                                                                                                                |
| Quantity of water used (gai.)  Quantity of cement used (lbs.) | 5 25 Dipolled                                                                                                          |
| Cement type                                                   | Portland /                                                                                                             |
| Quantity of bentonite used (lbs.)                             |                                                                                                                        |
| Quantity of calcium chloride used (lbs.)                      |                                                                                                                        |
| Volume of grout prepared (gal.)                               |                                                                                                                        |
| Volume of grout used (gal.)                                   | al                                                                                                                     |
|                                                               |                                                                                                                        |
| COMMENTS: Depth to water 1925 from                            | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, |
| Knockedout bottom plugo Loaded casing                         | well stickup etc                                                                                                       |
| brout. Pulled on casing, Retrievel - 6 ris                    | er and T                                                                                                               |
| of scien. Screen broke, Grantal remaining                     | sorehole 1                                                                                                             |

Geologic North Star

Drilling Contractor

| WELL DECOMMISSIONING RE                  | ECORD              |                     |                                            |
|------------------------------------------|--------------------|---------------------|--------------------------------------------|
| Δ                                        | ,                  | W. 11 VD. 40 4      | 11 12 n nC/                                |
| Site Name: Seneia Army Depo              | 7                  |                     | W12-04                                     |
| Site Location: SEAN 12                   |                    | Driller: 3 60       | H Breeds                                   |
| Drilling Company: Geologic North         | 1 stor             |                     | cott Dillman                               |
| 9                                        |                    | Date: 9/            |                                            |
| DECOMMISSIONING D                        | ATA                | W.                  | ELL SCHEMATIC*                             |
| (Fill in all that apply)                 | 1                  | Depth               | 20' >1 1/4.4'                              |
| `                                        |                    | (feet)              | 2.5 Kentral TOP TO                         |
| OVERDRILLING                             |                    |                     |                                            |
| Interval Drilled                         |                    |                     | 501                                        |
| Drilling Method(s)                       |                    |                     | <del>          </del>                      |
| Borehole Dia. (in.)                      |                    |                     |                                            |
| Temporary Casing Installed? (y/n)        |                    | 5                   | Grat                                       |
| Depth temporary casing installed         |                    |                     | Pulled (bran)                              |
| Casing type/dia. (in.)                   |                    |                     | I PAC                                      |
| Method of installing                     |                    |                     | I well                                     |
| CASING PULLING                           |                    |                     |                                            |
| Method employed                          | Grout, Pull, Growt | 10                  |                                            |
| Casing retrieved (feet)                  | 14.4 ft            |                     |                                            |
| Casing type/dia. (in.)                   | Z'PUC              |                     | - Bothom                                   |
|                                          |                    |                     | - Do Hom                                   |
| CASE PERFORATING                         |                    |                     | - Well                                     |
| Equipment used                           |                    |                     | - // ""                                    |
| Number of perforations/foot              |                    |                     | <del>-</del>                               |
| Size of perforations                     |                    |                     |                                            |
| Interval perforated                      |                    |                     |                                            |
| <u>GROUTING</u>                          |                    | 20                  |                                            |
| Interval grouted (FBLS)                  | 1-11.9 FA          |                     |                                            |
| # of batches prepared                    |                    |                     | _ / Not                                    |
| For each batch record:                   |                    |                     | DRILLED DRILLED                            |
| Quantity of water used (gal.)            | 18                 |                     | <u> </u>                                   |
| Quantity of cement used (lbs.)           | 2 5095             |                     | $\rightarrow$ $1/1$                        |
| Cement type                              | Type I Partland    |                     | $\rightarrow$ $V/I$                        |
| Quantity of bentonite used (lbs.)        | 10 pounds          |                     | <b>─</b> 1/ 1                              |
| Quantity of calcium chloride used (lbs.) |                    |                     | - $1/$                                     |
| Volume of grout prepared (gal.)          | 12 94              |                     |                                            |
| Volume of grout used (gal.)              | 16991              |                     |                                            |
| COMMENTS: Desth to water 7               | obft for TOC       | * Sketch in all rel | evant decommissioning data, including:     |
| Knocked off end care Loaded C.           | asing with growt.  | interval overdrille | ed, interval grouted, casing left in hole, |
| . 700000                                 | Emaining Boring.   | well stickup, etc.  |                                            |
| Add soil on top.                         | 7                  |                     |                                            |

Geologic North Star

Drilling Contractor

| WELL DECOMMISSIONING REC                                     | ORD                      |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------|--------------------------|---------|-----------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a Anna                                                       | 4                        | Well    | ID: /           | 1111                                    | 2-05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ari          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Name: Seneca Army Deplo                                 | /                        | Drille  |                 |                                         | reeds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Location: SEAD12                                        | <i>T</i>                 |         | otom <          | 611 D                                   | Dillma                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Drilling Company: Geologic North 5:                          | Tar                      | Inspe   | 1               | 1                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 5                                                            |                          | Date:   |                 | 15/10                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DECOMMISSIONING DAT                                          | A                        |         |                 | ELL SO                                  | CHEMATIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | *            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| (Fill in all that apply)                                     |                          | Dept    |                 |                                         | Removed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              | - 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| P                                                            |                          | (feet)  | )               |                                         | 2.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              | 20.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <u>OVERDRILLING</u>                                          |                          | -       | <del></del>     |                                         | Stickup                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | $\leftarrow$ | TOC TO TD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Interval Drilled                                             |                          |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15           | 15011                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Drilling Method(s)                                           | 7                        |         |                 |                                         | a de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de l |              | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Borehole Dia. (in.)                                          |                          |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Temporary Casing Installed? (y/n)                            |                          | 5       | <u> </u>        | -                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Depth temporary casing installed                             |                          |         |                 |                                         | Pulled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              | 6-1007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Casing type/dia. (in.)                                       |                          |         |                 |                                         | Polis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 11           | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Method of installing                                         |                          |         |                 |                                         | PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1 1          | D verification of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| CASING PULLING                                               |                          | rs.     |                 |                                         | well                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                              | prost Poll Growt         |         | D               |                                         | and the second                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing retrieved (feet)                                      | 17:1 ft                  |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing type/dia. (in.)                                       | 2" AVC                   |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CASE PERFORATING                                             |                          |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t |
| Equipment used                                               |                          | 1 '     | 5               |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1            | 1, 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Number of perforations/foot                                  |                          |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | Filled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Size of perforations                                         |                          |         |                 |                                         | Screen                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              | Screen                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Interval perforated                                          |                          |         |                 |                                         | broke off                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              | )=10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                              |                          | -       | 20              |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -            | Bettom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| GROUTING                                                     | 19 : 21                  |         | 20              |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | o F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Interval grouted (FBLS)                                      | 1-18.11+                 |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | $V_{i}$      | well                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| # of batches prepared                                        |                          |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1/1          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| For each batch record:                                       | 10.1                     |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | YZ           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of water used (gal.) Quantity of cement used (lbs.) | 18 gal                   |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1//          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1                                                            | Z bags<br>Typel Partland |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | NOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Cement type Quantity of bentonite used (lbs.)                | 10 Ameliano              |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              | )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Quantity of calcium chloride used (lbs.)                     | 10 popular               |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1//          | Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Volume of grout prepared (gal.)                              |                          |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | $V_{I}$      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Volume of grout used (gal.)                                  | 18 gal                   |         |                 |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                              | 10 741                   | ·       |                 | -                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| COMMENTS: Neith to water 11.7                                | 1 ft from TOC            | * Sket  | tch in all rele | evant deco                              | mmissioning dat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | a, includ    | ling:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                              | ing with grout.          | interva | al overdrille   |                                         | grouted, casing l                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                              | 375ft of Screen.         | well s  | tickup, etc.    |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Growted remaining buring. Adde                               |                          |         |                 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

Creplagic North Star Drilling Contractor

| WELL DECOMMISSIONING RECORD                                                                                                       |                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: SENECH ARMY NEPOT                                                                                                      | Well ID: M W 12-6                                                                                                                               |
| Site Location: SEAN - 12                                                                                                          | Driller: David Lions                                                                                                                            |
| Drilling Company: Gedogic North star                                                                                              | Inspector: Scott Nilman                                                                                                                         |
| J. Caballe 1777                                                                                                                   | Date: 1/25/2011                                                                                                                                 |
| DECOMMISSIONING DATA                                                                                                              | WELL SCHEMATIC*                                                                                                                                 |
| (Fill in all that apply)                                                                                                          | Depth 3 Like 10                                                                                                                                 |
| (t iii iii aii app.y)                                                                                                             | Depth (feet) 3 stickup Top To                                                                                                                   |
| OVERDRILLING                                                                                                                      | Removed TD                                                                                                                                      |
| Interval Drilled                                                                                                                  | Jul. 6'                                                                                                                                         |
| Drilling Method(s)                                                                                                                | 1 11.00                                                                                                                                         |
| Borehole Dia. (in.)                                                                                                               |                                                                                                                                                 |
| Temporary Casing Installed? (y/n)                                                                                                 | 4 - 1                                                                                                                                           |
| Depth temporary casing installed                                                                                                  | - Pulled Grout                                                                                                                                  |
| Casing type/dia. (in.)                                                                                                            |                                                                                                                                                 |
| Method of installing                                                                                                              | - 600                                                                                                                                           |
| CASING PULLING                                                                                                                    | Lessing                                                                                                                                         |
| Method employed 1 Creek, great pull grant                                                                                         |                                                                                                                                                 |
| Casing retrieved (feet)                                                                                                           |                                                                                                                                                 |
| Casing type/dia. (in.)                                                                                                            |                                                                                                                                                 |
|                                                                                                                                   | 11.6                                                                                                                                            |
| CASE PERFORATING                                                                                                                  | 15 - 11                                                                                                                                         |
| Equipment used                                                                                                                    |                                                                                                                                                 |
| Number of perforations/foot Size of perforations                                                                                  |                                                                                                                                                 |
| Interval perforated                                                                                                               |                                                                                                                                                 |
| incival periorated                                                                                                                | Not                                                                                                                                             |
| GROUTING                                                                                                                          |                                                                                                                                                 |
| Interval grouted (FBLS) 0 -/1.6 14                                                                                                | DRILLE                                                                                                                                          |
| # of batches prepared                                                                                                             |                                                                                                                                                 |
| For each batch record:                                                                                                            |                                                                                                                                                 |
| Quantity of water used (gal.)                                                                                                     |                                                                                                                                                 |
| Quantity of cement used (lbs.)                                                                                                    |                                                                                                                                                 |
| Cement type                                                                                                                       |                                                                                                                                                 |
| Quantity of bentonite used (lbs.)                                                                                                 |                                                                                                                                                 |
| Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.)                                                          |                                                                                                                                                 |
| Volume of grout used (gal.)                                                                                                       |                                                                                                                                                 |
| Totalic of grout and (gar.)                                                                                                       |                                                                                                                                                 |
| COMMENTS: Pepth to water = 4.50 ft. fonto<br>Knocked by t end plug: Localed casing with<br>grants Pulled Calsing ant Recover all. | Sketch in all relevant decommissioning data, including:     interval overdrilled, interval grouted, casing left in hole,     well stickup, etc. |
| Coolair North Star                                                                                                                |                                                                                                                                                 |

Department Representative

### Table 2-4 Well Decommissioning Record Well Abandonment Plan

Seneca Army Depot Activity

| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Site Name: Seneca , SEKD 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Well ID: MU12-09                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Site Location:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Driller: Scott Broads                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Drilling Company: Geologic North Star                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Inspector: Scott Dillman                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 8001/10 7007 100 7007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Date: 12/13/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| DECOMMISSIONING DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| (Fill in all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | WELL SCHEMATIC* Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| (1 iii iii dii dida appiy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Les Dell L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| OVERDRILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (reet) 16.6 +2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Interval Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 50,1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Drilling Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Borehole Dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1 1 1 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Temporary Casing Installed? (y/n)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Depth temporary casing installed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 5 (asira)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | pulled 19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Method of installing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| CASING PULLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Method employed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | r 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Casing retrieved (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Bottom of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CASE PERFORATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | weil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Equipment used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Number of perforations/foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 15 Below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Size of perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | - Ground                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Interval perforated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| GROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Interval grouted (FBLS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| # of batches prepared                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ]   NET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| For each batch record:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MILLEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Quantity of water used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | I MILLEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Quantity of cement used (lbs.) 2 644 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Cement type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of bentonite used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of calcium chloride used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Volume of grout prepared (gal.) Volume of grout used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Volume of grout used (gal.) ~13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| COMMENTS: South to water 12.52 Toc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | *Classical and a second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second |
| Knocked ortend cap. Loadel consing with grout. Alle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | * Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Ground site and silled PUL sizer and screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | box e grout.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| ) The same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

Geologic North Star

Drilling Contractor

| WELL DECOMMISSIONING                                         | RECORD            |                     | ,                                                        |
|--------------------------------------------------------------|-------------------|---------------------|----------------------------------------------------------|
| Site Name: Seve a A                                          | emy Derot         | Well ID:            | MW-12-16                                                 |
| Site Location: MW12-16                                       | SEAD 12           |                     | - I O O                                                  |
| Drilling Company: Geologie                                   | All die           |                     | 1                                                        |
|                                                              | TOO FIVE I TOOL   | Date: 9             | 5 catt Dillman                                           |
| DECOMMISSIONING                                              | DATA              | Date.               | 12110                                                    |
| (Fill in all that app                                        |                   | Depth               | WELL SCHEMATIC*                                          |
| (* a a                                                       | <del>.</del> ,    | (feet)              | Stickup - 16.6                                           |
| OVERDRILLING                                                 |                   | . 0                 | Z.2 TO from TOC                                          |
| Interval Drilled                                             |                   |                     | - Soil                                                   |
| Drilling Method(s)                                           |                   |                     | 1 1 3011                                                 |
| Borehole Dia. (in.)                                          |                   |                     | - onled Tremie                                           |
| Temporary Casing Installed? (y/n)                            |                   |                     | port soutill brokefull                                   |
| Depth temporary casing installed                             |                   |                     | 150 Cil                                                  |
| Casing type/dia. (in.) Method of installing                  |                   |                     | casing becket                                            |
| inteniod of instanting                                       |                   |                     |                                                          |
| CASING PULLING                                               |                   |                     | - 1 1 1                                                  |
| Method employed                                              | Grant Puall Grant | 10                  | TEMPORAL MARKAGE AND AND AND AND AND AND AND AND AND AND |
| Casing retrieved (feet)                                      | 110.6             |                     | Authorities and the second                               |
| Casing type/dia. (in.)                                       | 2" NC             |                     |                                                          |
| CASE PERFORATING                                             |                   | <i>بـر</i>          | Betton                                                   |
| Equipment used                                               |                   | 14                  | of well                                                  |
| Number of perforations/foot                                  |                   | - 1 -               |                                                          |
| Size of perforations                                         |                   |                     |                                                          |
| Interval perforated                                          |                   |                     |                                                          |
| GROUTING                                                     |                   |                     |                                                          |
| Interval grouted (FBLS)                                      | 1-14              |                     | NOT                                                      |
| # of batches prepared                                        |                   |                     | brilled                                                  |
| For each batch record:                                       |                   |                     |                                                          |
| Quantity of water used (gal.) Quantity of cement used (lbs.) | 18                |                     |                                                          |
| Cement type                                                  | 2 beys            |                     |                                                          |
| Quantity of bentonite used (lbs.)                            | 10. 1             |                     |                                                          |
| Quantity of calcium chloride used (lbs.)                     | 10 porners        |                     | $  2\rangle$                                             |
| Volume of grout prepared (gal.)                              |                   |                     |                                                          |
| Volume of grout used (gal.)                                  | 14 gal.           |                     |                                                          |
|                                                              | 1                 |                     |                                                          |
| COMMENTS: Death To Water                                     | 12.03             | * Sketch in all rel | evant decommissioning data, including:                   |
| funch but bottom plug. Load carrie with grout.               |                   | interval overdrille | ed, interval grouted, casing left in hole,               |
| trilled curring. Tremie grouted                              | additional grout. | well stickup, etc.  |                                                          |
| Added soil above grout.                                      | J                 |                     |                                                          |
| Prestante Ation                                              | -1                |                     |                                                          |

#### WELL DECOMMISSIONING RECORD SENERA ARMY DE POT Site Name: m Well ID: Site Location: 116012-1 SEAD Driller: Drilling Company: North Stu G-60/09 12 Inspector: 13/10 Date: DECOMMISSIONING DATA WELL SCHEMATIC\* (Fill in all that apply) Depth 2.91 (feet) Stickup **OVERDRILLING** Interval Drilled Drilling Method(s) Borehole Dia. (in.) Palel Temporary Casing Installed? (y/n) Depth temporary casing installed NC Casing type/dia. (in.) Method of installing CASING PULLING Method employed Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated Botton of well GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) NOT Quantity of cement used (lbs.) DRILLED Cement type Quantity of bentonite used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.) COMMENTS: \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Department Representative

| WELL DECOMMISSIONING                                                     | RECORD             |                                           | •                                                                              |
|--------------------------------------------------------------------------|--------------------|-------------------------------------------|--------------------------------------------------------------------------------|
| Site Name: Seneca Army Dep                                               | 00+                | Well ID: h                                | W12-18                                                                         |
| Site Location: MU12-18 9 56                                              |                    |                                           | -It Breeds                                                                     |
| Drilling Company: Geologic North                                         | Star               |                                           | Gett Dillman                                                                   |
|                                                                          |                    | Date: 9/                                  | 13/10                                                                          |
| DECOMMISSIONING                                                          | CDATA              | , , ,                                     |                                                                                |
| (Fill in all that ap                                                     |                    |                                           | VELL SCHEMATIC*                                                                |
| (i iii iii aii tilat ap                                                  | piy)               | Depth (feet)                              | Sticked 17                                                                     |
| OVERDRILLING                                                             |                    | (leet)                                    | 2,6' from Too                                                                  |
| Interval Drilled                                                         |                    |                                           | TO TA                                                                          |
| Drilling Method(s)                                                       |                    |                                           |                                                                                |
| Borehole Dia. (in.)                                                      |                    |                                           | <del> </del>      ·                                                            |
| Temporary Casing Installed? (y/n)                                        |                    |                                           |                                                                                |
| Depth temporary casing installed                                         |                    | 5                                         |                                                                                |
| Casing type/dia. (in.)                                                   |                    |                                           |                                                                                |
| Method of installing                                                     |                    |                                           | Removed                                                                        |
|                                                                          |                    |                                           | 10 11                                                                          |
| CASING PULLING                                                           |                    |                                           | Pro Growt                                                                      |
| Method employed                                                          | Grost, pull, Grant | 10                                        | backfull                                                                       |
| Casing retrieved (feet)                                                  | 17'                |                                           |                                                                                |
| Casing type/dia. (in.)                                                   | PVC 2"             |                                           |                                                                                |
| CASE PERFORATING                                                         |                    |                                           |                                                                                |
| Equipment used                                                           |                    | 15                                        |                                                                                |
| Number of perforations/foot                                              |                    |                                           | well                                                                           |
| Size of perforations                                                     |                    |                                           | T / TA                                                                         |
| Interval perforated                                                      |                    |                                           |                                                                                |
| GROUTING                                                                 |                    | 20                                        |                                                                                |
| Interval grouted (FBLS)                                                  | 1-17'              |                                           |                                                                                |
| # of batches prepared                                                    | 1                  |                                           |                                                                                |
| For each batch record:                                                   |                    |                                           |                                                                                |
| Quantity of water used (gal.)                                            | 18                 |                                           | NET                                                                            |
| Quantity of cement used (lbs.)                                           | 2-6a45             |                                           | DRILLED                                                                        |
| Cement type                                                              | Type I portland    |                                           |                                                                                |
| Quantity of bentonite used (lbs.)                                        | 10 journes         |                                           |                                                                                |
| Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) |                    |                                           |                                                                                |
| Volume of grout prepared (gal.) Volume of grout used (gal.)              | 1:7                |                                           |                                                                                |
| volume of grout used (gal.)                                              | - I gal            |                                           |                                                                                |
| COMMENTS: Neath To water 1                                               | 403 from TOG       |                                           |                                                                                |
|                                                                          | 40 ) from TOC      | * Sketch in all relevinterval overdrilled | ant decommissioning data, including:<br>interval grouted, casing left in hole, |
| Pulled casivia. Trendie asunted                                          | , , ,              | well stickup, etc.                        | moral grouted, casing left in note,                                            |
| Added soil above growta                                                  | - small make       | •                                         |                                                                                |
| TOWN A                                                                   | <u> </u>           |                                           |                                                                                |

| WELL DECOMMISSIONING I                                       | RECORD             |                    |                                            |
|--------------------------------------------------------------|--------------------|--------------------|--------------------------------------------|
| Site Name: Seneca Army J                                     | enet               | Well ID: 1         | 1212-19                                    |
| Site Location: SEAD 1Z                                       | U .                |                    | cott Breeds                                |
|                                                              | th Star            |                    | Scott Dillman                              |
| Diffilling Company. 17 25 18 4 12 10 20                      | 11-7 1144          | Date: 9            | 114/10                                     |
|                                                              | D.1.77.1           |                    | VELL COURMATICS                            |
| DECOMMISSIONING                                              |                    |                    | WELL SCHEMATIC*                            |
| (Fill in all that app                                        | iy)                | Depth<br>(feet)    | 27' 11 1/57                                |
| <u>OVERDRILLING</u>                                          |                    | (leet)             | sheleved Top To                            |
| Interval Drilled                                             |                    |                    | 1 501                                      |
| Drilling Method(s)                                           |                    |                    |                                            |
| Borehole Dia. (in.)                                          |                    |                    |                                            |
| Temporary Casing Installed? (y/n)                            |                    | . ـــــر           | polled forant                              |
| Depth temporary casing installed                             |                    | 5                  | <b></b>                                    |
| Casing type/dia. (in.)                                       |                    |                    | eve P                                      |
| Method of installing                                         | -2                 |                    | WELL                                       |
|                                                              |                    |                    |                                            |
| CASING PULLING                                               |                    | : ~                |                                            |
| Method employed                                              | Grant Pull brout   | 10                 |                                            |
| Casing retrieved (feet)                                      | 13.3 f+            |                    |                                            |
| Casing type/dia. (in.)                                       | Z'PVC              |                    |                                            |
| 776.                                                         |                    |                    |                                            |
| CASE PERFORATING                                             |                    | 1                  |                                            |
| Equipment used                                               |                    | ( )                |                                            |
| Number of perforations/foot                                  |                    |                    |                                            |
| Size of perforations                                         |                    |                    |                                            |
| Interval perforated                                          |                    |                    | $\rightarrow$                              |
|                                                              |                    |                    |                                            |
| GROUTING                                                     | 101101             |                    | _                                          |
| Interval grouted (FBLS)                                      | 1-10,48+           |                    |                                            |
| # of batches prepared                                        |                    |                    | *                                          |
| For each batch record:                                       | 18                 |                    | <del> </del>                               |
| Quantity of water used (gal.) Quantity of cement used (lbs.) | 2 be 95            |                    | <del>-</del>                               |
| Cement type                                                  | _ 1/               |                    |                                            |
| Quantity of bentonite used (lbs.)                            | 1 year             |                    |                                            |
| Quantity of behome used (188.)                               | 10 founds          |                    |                                            |
| Volume of grout prepared (gal.)                              |                    |                    |                                            |
| Volume of grout used (gal.)                                  | llgal              |                    |                                            |
| (54.1)                                                       | -1 juic 1          |                    |                                            |
| COMMENTS: Neath to water =                                   | 7.56 From TOL      | * Sketch in all re | elevant decommissioning data, including:   |
| Knocked and plug off. Loa                                    | ded casing full of | interval overdrill | ed, interval grouted, casing left in hole, |
| gout. fulled casing, Grouted remaining                       |                    | well stickup, etc. |                                            |
| Jilo Aldal Sil A ton                                         |                    |                    |                                            |

beologic North Star Drilling Contractor

| WELL DECOMMISSIONING RECORD                                                                                                                                    | •                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: Seneca Army Depot                                                                                                                                   | Well ID: 14 W 12-20                                                                                                                       |
| Site Location: $5EAA 12$                                                                                                                                       | Driller: 5 60 H Mreeds                                                                                                                    |
| Drilling Company: Geologic North Star                                                                                                                          | Inspector: Feath Dillman                                                                                                                  |
| Drining company. D Greg C                                                                                                                                      | Date: 9 /14/10                                                                                                                            |
| DECOMMISSIONING DATA                                                                                                                                           | WELL SCHEMATIC*                                                                                                                           |
| (Fill in all that apply)                                                                                                                                       |                                                                                                                                           |
| (1 iii iii aii that appry)                                                                                                                                     | Depth (feet) 2.7 Pp to                                                                                                                    |
| OVERDRILLING                                                                                                                                                   | 2 permotes TD                                                                                                                             |
| Interval Drilled                                                                                                                                               | 5014                                                                                                                                      |
| Drilling Method(s)                                                                                                                                             |                                                                                                                                           |
| Borehole Dia. (in.)                                                                                                                                            | Grant                                                                                                                                     |
| Temporary Casing Installed? (y/n)                                                                                                                              |                                                                                                                                           |
| Depth temporary casing installed                                                                                                                               | 5 pulled                                                                                                                                  |
| Casing type/dia. (in.)                                                                                                                                         |                                                                                                                                           |
| Method of installing                                                                                                                                           | 610                                                                                                                                       |
| CASING PULLING                                                                                                                                                 | well                                                                                                                                      |
| Method employed Grat Poll Grat                                                                                                                                 | 10 -                                                                                                                                      |
| Casing retrieved (feet)                                                                                                                                        |                                                                                                                                           |
| Casing type/dia. (in.)                                                                                                                                         |                                                                                                                                           |
|                                                                                                                                                                |                                                                                                                                           |
| CASE PERFORATING                                                                                                                                               | 15 - BOTTOM                                                                                                                               |
| Equipment used                                                                                                                                                 | of of                                                                                                                                     |
| Number of perforations/foot                                                                                                                                    | - Weil                                                                                                                                    |
| Size of perforations                                                                                                                                           |                                                                                                                                           |
| Interval perforated                                                                                                                                            |                                                                                                                                           |
| GROUTING                                                                                                                                                       | <del>-</del>                                                                                                                              |
| Interval grouted (FBLS) $1 - 14.2'$                                                                                                                            |                                                                                                                                           |
| # of batches prepared                                                                                                                                          |                                                                                                                                           |
| For each batch record:                                                                                                                                         |                                                                                                                                           |
| Quantity of water used (gal.)                                                                                                                                  |                                                                                                                                           |
| Quantity of cement used (lbs.) 2 5 6 5                                                                                                                         |                                                                                                                                           |
| Cement type Tyne Tyne                                                                                                                                          |                                                                                                                                           |
| Quantity of bentonite used (lbs.)                                                                                                                              |                                                                                                                                           |
| Quantity of calcium chloride used (lbs.)                                                                                                                       |                                                                                                                                           |
| Volume of grout prepared (gal.)                                                                                                                                |                                                                                                                                           |
| Volume of grout used (gal.)                                                                                                                                    |                                                                                                                                           |
| COMMENTS: Depth to water = 7.22 from ToC,<br>Knocked end capaff. Leaded sasing with<br>grout. Pulled casing a crowted remaining<br>boring - Added soil on top. | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |

Oldogic North Star
Drilling Contractor

| WELL DECOMMISSIONING RECORD                     |                                                                                                                        |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Site Name: Sencia Army Depot                    | Well ID: MU12-21                                                                                                       |
| Site Location: SEAD 12                          | Driller: Scott Breeds                                                                                                  |
| Drilling Company: Gaologic North Star           |                                                                                                                        |
| Diffing Company. G = 8 10 g 1 C 7 C 7 1 5 7 5 7 | Date: 9/14/10                                                                                                          |
| DECOMMISSIONING DATA                            | WELL SCHEMATIC*                                                                                                        |
| (Fill in all that apply)                        | Denth . (                                                                                                              |
| (1-111 III all that apply)                      | (feet) 2.8   14                                                                                                        |
| OVERDRILLING                                    | O greenosed tarto                                                                                                      |
| Interval Drilled                                | 7011                                                                                                                   |
| Drilling Method(s)                              |                                                                                                                        |
| Borehole Dia. (in.)                             | Grant                                                                                                                  |
| Temporary Casing Installed? (y/n)               | 5 - Pulled on the                                                                                                      |
| Depth temporary casing installed                |                                                                                                                        |
| Casing type/dia. (in.)                          | DAC 1                                                                                                                  |
| Method of installing                            | - well                                                                                                                 |
| CASING PULLING                                  |                                                                                                                        |
| Method employed                                 | 1 street 10                                                                                                            |
| Casing retrieved (feet)                         |                                                                                                                        |
| Casing type/dia. (in.)                          |                                                                                                                        |
|                                                 | -   well                                                                                                               |
| CASE PERFORATING                                | _   15 _                                                                                                               |
| Equipment used                                  |                                                                                                                        |
| Number of perforations/foot                     | $\rightarrow$ $\rightarrow$ $\rightarrow$ $\rightarrow$                                                                |
| Size of perforations                            | - Not                                                                                                                  |
| Interval perforated                             | Dr. Ned                                                                                                                |
| GROUTING                                        |                                                                                                                        |
| Interval grouted (FBLS)                         |                                                                                                                        |
| # of batches prepared                           |                                                                                                                        |
| For each batch record:                          | <b>-</b>   <del>-</del>     <del> </del>                                                                               |
| Quantity of water used (gal.)                   |                                                                                                                        |
| Quantity of cement used (lbs.) Z 544            | 5                                                                                                                      |
| Cement type Type                                |                                                                                                                        |
| Quantity of bentonite used (lbs.)               | $\rightarrow$ $1/1$                                                                                                    |
| Quantity of calcium chloride used (lbs.)        |                                                                                                                        |
| Volume of grout prepared (gal.)                 |                                                                                                                        |
| Volume of grout used (gal.)                     |                                                                                                                        |
| COMMENTS: Depth to water = 3ft from             | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, |
| Knocked off end cap. Loaded casing              | well stickup, etc.                                                                                                     |
| highle Ald ill of top.                          |                                                                                                                        |

Geologic North Star

| WELL DECOMMISSIONING RECOR                                                  | D .                                                                                                                                       |
|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: Seneca Army Depot                                                | Well ID: M 12-22                                                                                                                          |
| Site Name: Seneca Army Sepot Site Location: SEADIZ                          | Driller: Scott Biseds                                                                                                                     |
| Dilling Company ( R. )                                                      |                                                                                                                                           |
| Drilling Company: GRologic North Star                                       | Date: 9/14/10                                                                                                                             |
|                                                                             | WELL SCHEMATIC*                                                                                                                           |
| DECOMMISSIONING DATA                                                        | Davids                                                                                                                                    |
| (Fill in all that apply)                                                    | 71 6 1 1 6 8                                                                                                                              |
| OVERDRILLING                                                                | (feet) 2.8 Tours                                                                                                                          |
| Interval Drilled                                                            | 501                                                                                                                                       |
| Drilling Method(s)                                                          |                                                                                                                                           |
| Borehole Dia. (in.)                                                         |                                                                                                                                           |
| Temporary Casing Installed? (y/n)                                           |                                                                                                                                           |
| Depth temporary casing installed                                            | 5 J 6000                                                                                                                                  |
| Casing type/dia. (in.)                                                      | pulled et Grav                                                                                                                            |
| Method of installing                                                        |                                                                                                                                           |
|                                                                             | well Lasing                                                                                                                               |
| CASING PULLING                                                              |                                                                                                                                           |
|                                                                             | t. P.11. Grant                                                                                                                            |
|                                                                             | PNC                                                                                                                                       |
| Casing type dia. (iii.)                                                     | Bettone                                                                                                                                   |
| CASE PERFORATING                                                            |                                                                                                                                           |
| Equipment used                                                              | 15 dell                                                                                                                                   |
| Number of perforations/foot                                                 |                                                                                                                                           |
| Size of perforations                                                        |                                                                                                                                           |
| Interval perforated                                                         |                                                                                                                                           |
|                                                                             |                                                                                                                                           |
| GROUTING                                                                    |                                                                                                                                           |
| Interval grouted (FBLS)                                                     | 13 ft. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \                                                                                              |
| # of batches prepared                                                       | I NOT                                                                                                                                     |
| For each batch record:                                                      | DRILLE DRILLE                                                                                                                             |
| Quantity of water used (gal.)                                               |                                                                                                                                           |
| ·   -                                                                       | 5495                                                                                                                                      |
| Cement type Quantity of bentonite used (lbs.)                               |                                                                                                                                           |
| Quantity of calcium chloride used (lbs.)                                    |                                                                                                                                           |
| Volume of grout prepared (gal.)                                             |                                                                                                                                           |
|                                                                             | Baala                                                                                                                                     |
| (6)                                                                         |                                                                                                                                           |
| Knocked off end cap. Filled casing wi<br>filled casing. Filled remaining he | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |

Geologic North Star

| WELL DECOMMISSIONING RECORD                                              |                                                              |
|--------------------------------------------------------------------------|--------------------------------------------------------------|
|                                                                          | •                                                            |
| Site Name: SENECA ARMY DEPOT                                             | Well ID: MW/2-23                                             |
| Site Location: $SEAD$ /2                                                 | Driller: Scott Breeds                                        |
| Drilling Company: Geologic North Star                                    | Inspector: Scott Dillman                                     |
| Diffing Company. 6-65/64 te 1-67/66 1/27                                 | Date: 9/19/10                                                |
| DEGOVA (ICCIONINIC DATA                                                  | ,                                                            |
| DECOMMISSIONING DATA                                                     | WELL SCHEMATIC*  Depth  Depth  15.8                          |
| (Fill in all that apply)                                                 |                                                              |
| <u>OVERDRILLING</u>                                                      | (feet) 2.5> Too To                                           |
| Interval Drilled                                                         | 50:1                                                         |
| Drilling Method(s)                                                       |                                                              |
| Borehole Dia. (in.)                                                      | <u> </u>                                                     |
| Temporary Casing Installed? (y/n)                                        |                                                              |
| Depth temporary casing installed                                         | ) -     (crost                                               |
| Casing type/dia. (in.)                                                   |                                                              |
| Method of installing                                                     | - puled   t                                                  |
| interior of motorning                                                    | well -                                                       |
| CASING PULLING                                                           | 10 Losing                                                    |
| Method employed                                                          |                                                              |
| Casing retrieved (feet)                                                  |                                                              |
| Casing type/dia. (in.)                                                   |                                                              |
|                                                                          | Bottom                                                       |
| CASE PERFORATING                                                         | 15 To Fivel                                                  |
| Equipment used                                                           |                                                              |
| Number of perforations/foot                                              |                                                              |
| Size of perforations                                                     |                                                              |
| Interval perforated                                                      |                                                              |
|                                                                          |                                                              |
| GROUTING                                                                 | N6T                                                          |
| Interval grouted (FBLS)                                                  |                                                              |
| # of batches prepared                                                    | DETLED                                                       |
| For each batch record:                                                   | <u> </u>                                                     |
| Quantity of water used (gal.)                                            | <u> </u>                                                     |
| Quantity of cement used (lbs.)                                           |                                                              |
| Cement type  Type 1                                                      | <u> </u>                                                     |
| Quantity of bentonite used (lbs.)                                        |                                                              |
| Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) |                                                              |
| Volume of grout used (gal.)                                              | <del> </del>  /                                              |
| volume of grout used (gar.)                                              |                                                              |
| COMMENTS: heath to list - 8.8 ft from TOC.                               | * Sketch in all relevant decommissioning data, including:    |
| Kappilled off end cas, Tremied arout into casing                         | interval overdrilled, interval grouted, casing left in hole, |
| Pulled Casing, Added more grout to barrhole                              | well stickup, etc.                                           |
| Added soil to too.                                                       |                                                              |
|                                                                          |                                                              |
| 6-eologic North star                                                     |                                                              |
| Drilling Contractor                                                      | Department Representative                                    |

| WELL DECOMMISSIONING RECORD                                 | ,                                                            |
|-------------------------------------------------------------|--------------------------------------------------------------|
| Site Name: Sereca Army Aspot                                | Well ID: MW/2-224                                            |
|                                                             | Driller: Scatt Breeds                                        |
| Site Location: SEAD 17                                      | Inspector: SEOT Dillman                                      |
| Drilling Company: Belongie North Star                       |                                                              |
|                                                             |                                                              |
| DECOMMISSIONING DATA                                        | WELL SCHEMATIC*                                              |
| (Fill in all that apply)                                    | Depth Remosed                                                |
|                                                             | (feet) 2.6 dep Toto                                          |
| OVERDRILLING                                                | - Soil                                                       |
| Interval Drilled                                            | 1 7011                                                       |
| Drilling Method(s)                                          |                                                              |
| Borehole Dia. (in.)                                         |                                                              |
| Temporary Casing Installed? (y/n)                           | 5 July Growt                                                 |
| Depth temporary casing installed                            | - Pulled + Growt                                             |
| Casing type/dia. (in.)                                      |                                                              |
| Method of installing                                        | - PVC                                                        |
| CASING PULLING                                              | Dell                                                         |
| Method employed Grant, Pull, Grant                          |                                                              |
| Casing retrieved (feet)                                     |                                                              |
| Casing type/dia. (in.)                                      | BoTTIME                                                      |
| Cashing type and (int)                                      | 1 0+                                                         |
| CASE PERFORATING                                            | I Well                                                       |
| Equipment used                                              |                                                              |
| Number of perforations/foot                                 |                                                              |
| Size of perforations                                        |                                                              |
| Interval perforated                                         |                                                              |
|                                                             | Not                                                          |
| GROUTING                                                    | Druiel                                                       |
| Interval grouted (FBLS)                                     | - Dentes                                                     |
| # of batches prepared                                       | / / /                                                        |
| For each batch record:                                      | - $1/$                                                       |
| Quantity of water used (gal.)                               |                                                              |
| Quantity of cement used (lbs.)                              |                                                              |
| Cement type                                                 |                                                              |
| Quantity of bentonite used (lbs.)                           |                                                              |
| Quantity of calcium chloride used (lbs.)                    |                                                              |
| Volume of grout prepared (gal.) Volume of grout used (gal.) |                                                              |
| Volume of grout used (gal.)                                 |                                                              |
| COMMENTS: De offe to water 10,27 from TOC.                  | * Sketch in all relevant decommissioning data, including:    |
|                                                             | interval overdrilled, interval grouted, casing left in hole, |
| Filled casing, brouted remaining boral                      | well stickup, etc.                                           |
| with egg To Italy sail at top.                              |                                                              |

Geologic North Star

| WELL DECOMMISSIONING RE                                    | ECORD              |                   |                                                                                           |
|------------------------------------------------------------|--------------------|-------------------|-------------------------------------------------------------------------------------------|
| a A J                                                      | <u> </u>           | Well ID: A        | 4412-25                                                                                   |
| Site Name: Seneca Army Depot                               |                    |                   | ecH Breeds                                                                                |
| Site Location: SEAN 12                                     |                    |                   | Scott Dillman                                                                             |
| Drilling Company: G-&logic North:                          | Star               | . /               | 5/10                                                                                      |
|                                                            |                    |                   |                                                                                           |
| DECOMMISSIONING D                                          | ATA                |                   | VELL SCHEMATIC*                                                                           |
| (Fill in all that apply)                                   |                    | Depth             | 541ckup, 13.7                                                                             |
|                                                            |                    | (feet)            | 2.1 TOPTO                                                                                 |
| OVERDRILLING                                               |                    |                   | - Soil                                                                                    |
| Interval Drilled                                           |                    |                   |                                                                                           |
| Drilling Method(s)                                         |                    |                   |                                                                                           |
| Borehole Dia. (in.)                                        |                    |                   | - Grout                                                                                   |
| Temporary Casing Installed? (y/n)                          |                    | 5                 | 1 1 4                                                                                     |
| Depth temporary casing installed                           |                    |                   | puledo                                                                                    |
| Casing type/dia. (in.) Method of installing                |                    |                   |                                                                                           |
| Method of histaning                                        |                    |                   | DIC II                                                                                    |
| CASING PULLING                                             |                    | 10                | well \                                                                                    |
| Method employed                                            | Grout, Pull, Grout |                   |                                                                                           |
| Casing retrieved (feet)                                    | 13.7 ft            |                   | - Bottone                                                                                 |
| Casing type/dia. (in.)                                     | 2" puc             |                   | J st well                                                                                 |
| 7                                                          |                    |                   | we II                                                                                     |
| CASE PERFORATING                                           |                    | 15                | <del>-</del>     /                                                                        |
| Equipment used                                             |                    |                   | $\rightarrow$ $V$ $\downarrow$                                                            |
| Number of perforations/foot                                |                    |                   | -                                                                                         |
| Size of perforations                                       |                    |                   | <del>-</del>    /                                                                         |
| Interval perforated                                        |                    |                   | -   NoT                                                                                   |
| <u>GROUTING</u>                                            |                    |                   | - Drilled                                                                                 |
| Interval grouted (FBLS)                                    | 1-10.8'            |                   |                                                                                           |
| # of batches prepared                                      | 1                  |                   |                                                                                           |
| For each batch record:                                     |                    |                   |                                                                                           |
| Quantity of water used (gal.)                              | 18                 |                   |                                                                                           |
| Quantity of cement used (lbs.)                             | 2 5295             |                   | _                                                                                         |
| Cement type                                                | Tyle 1             |                   | $\rightarrow$ $1/1$                                                                       |
| Quantity of bentonite used (lbs.)                          | 110                |                   | - $ $ $ $                                                                                 |
| Quantity of calcium chloride used (lbs.)                   |                    |                   |                                                                                           |
| Volume of grout prepared (gal.)                            | 11                 |                   |                                                                                           |
| Volume of grout used (gal.)                                | ll gal             |                   |                                                                                           |
| COMMENTS: depth to water = 9<br>Knocked out end cap. Loade |                    | interval overdril | relevant decommissioning data, including: lled, interval grouted, casing left in hole, c. |
| grout, Pulled casing. Grouted                              | remaining bosehold | 2 .               |                                                                                           |

Geologic North Star

Drilling Contractor

| WELL DECOMMISSIONING RECORD                                              |                                                                                 |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 4 A 4                                                                    | Well ID: MU-12-26                                                               |
| Site Name: Senera Army Depot                                             |                                                                                 |
| Site Location: SEAN 12                                                   | / 0.31/                                                                         |
| Drilling Company: Geologic North Star                                    | Inspector: Scatt Dillman                                                        |
| J J                                                                      | Date: 9/15/10                                                                   |
| DECOMMISSIONING DATA                                                     | WELL SCHEMATIC*                                                                 |
| (Fill in all that apply)                                                 | Depth (feet) 2.6 ft   1/3,55                                                    |
| (                                                                        | St icitup                                                                       |
| OVERDRILLING                                                             | 1 removed                                                                       |
| Interval Drilled                                                         |                                                                                 |
| Drilling Method(s)                                                       | _ \ \ \ \ \ \ \                                                                 |
| Borehole Dia. (in.)                                                      | pulled 6 Grant                                                                  |
| Temporary Casing Installed? (y/n)                                        |                                                                                 |
| Depth temporary casing installed                                         |                                                                                 |
| Casing type/dia. (in.)                                                   | well                                                                            |
| Method of installing                                                     |                                                                                 |
| G + GD IG DUIL I INC                                                     |                                                                                 |
| Method employed Grant Pull Brant                                         |                                                                                 |
| Method employed  Casing retrieved (feet)  Casing retrieved (feet)        |                                                                                 |
| Casing type/dia. (in.)                                                   | Betton                                                                          |
| Casing type/dia. (iii.)                                                  | - J of well                                                                     |
| CASE PERFORATING                                                         |                                                                                 |
| Equipment used                                                           |                                                                                 |
| Number of perforations/foot                                              |                                                                                 |
| Size of perforations                                                     |                                                                                 |
| Interval perforated                                                      |                                                                                 |
| ·                                                                        |                                                                                 |
| GROUTING                                                                 | Not                                                                             |
| Interval grouted (FBLS)                                                  |                                                                                 |
| # of batches prepared                                                    | - Orillal                                                                       |
| For each batch record:                                                   |                                                                                 |
| Quantity of water used (gal.)                                            |                                                                                 |
| Quantity of cement used (lbs.)                                           |                                                                                 |
| Cement type  Overtity of bentonite used (lbs.)                           |                                                                                 |
| Quality of bentonite used (1887)                                         |                                                                                 |
| Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) |                                                                                 |
| Volume of grout used (gal.)  Volume of grout used (gal.)                 |                                                                                 |
| Volume of grout used (gail.)                                             |                                                                                 |
| COMMENTS: Depth to water = 9.55 ft. from Too                             | * Sketch in all relevant decommissioning data, including:                       |
| Knocked off end cap. Loaded casing with gra                              | interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |
| Pulled casing broated remaining borehole:                                | wen snokup, etc.                                                                |
| spelded soit at top.                                                     |                                                                                 |

beologic North star

Drilling Contractor

| WELL DECOMMISSIONING RECORD                                                                                                       |                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Si y San Anna Mant                                                                                                                | Well ID: MW12-27                                                                                                                          |
| Site Name: Seneca Arma Depot                                                                                                      | Driller: 5 cott Breeds                                                                                                                    |
| Site Location: 5EAD 12                                                                                                            | Inspector: Scott Dillman                                                                                                                  |
| Drilling Company: Geologic North Star                                                                                             | Date: 9/14/10                                                                                                                             |
|                                                                                                                                   |                                                                                                                                           |
| DECOMMISSIONING DATA                                                                                                              | WELL SCHEMATIC*                                                                                                                           |
| (Fill in all that apply)                                                                                                          | Depth 3.1' 1 12.8'                                                                                                                        |
|                                                                                                                                   | (Teel) Top To                                                                                                                             |
| OVERDRILLING                                                                                                                      |                                                                                                                                           |
| Interval Drilled                                                                                                                  | Soil                                                                                                                                      |
| Drilling Method(s)                                                                                                                |                                                                                                                                           |
| Borehole Dia. (in.)                                                                                                               | Grout                                                                                                                                     |
| Temporary Casing Installed? (y/n)                                                                                                 | 5 pulled 1 form                                                                                                                           |
| Depth temporary casing installed                                                                                                  | 100                                                                                                                                       |
| Casing type/dia. (in.)                                                                                                            | - \ \Jel\                                                                                                                                 |
| Method of installing                                                                                                              |                                                                                                                                           |
| CASING PULLING                                                                                                                    |                                                                                                                                           |
| Method employed Grat Pullbrant                                                                                                    |                                                                                                                                           |
| Casing retrieved (feet)                                                                                                           | Botton                                                                                                                                    |
| Casing type/dia. (in.)                                                                                                            | well                                                                                                                                      |
| Casing typordia. (iii.)                                                                                                           |                                                                                                                                           |
| CASE PERFORATING                                                                                                                  |                                                                                                                                           |
| Equipment used                                                                                                                    |                                                                                                                                           |
| Number of perforations/foot                                                                                                       |                                                                                                                                           |
| Size of perforations                                                                                                              |                                                                                                                                           |
| Interval perforated                                                                                                               |                                                                                                                                           |
|                                                                                                                                   |                                                                                                                                           |
| GROUTING                                                                                                                          |                                                                                                                                           |
| Interval grouted (FBLS)                                                                                                           |                                                                                                                                           |
| # of batches prepared                                                                                                             |                                                                                                                                           |
| For each batch record:                                                                                                            |                                                                                                                                           |
| Quantity of water used (gal.)                                                                                                     |                                                                                                                                           |
| Quantity of cement used (lbs.)                                                                                                    |                                                                                                                                           |
| Cement type                                                                                                                       |                                                                                                                                           |
| Quantity of bentonite used (lbs.)                                                                                                 |                                                                                                                                           |
| Quantity of calcium chloride used (lbs.)                                                                                          |                                                                                                                                           |
| Volume of grout prepared (gal.)                                                                                                   |                                                                                                                                           |
| Volume of grout used (gal.)                                                                                                       |                                                                                                                                           |
| COMMENTS: Depth to water 9.6 from TOC<br>Knocked off end cap. Loaded casing with growt.<br>Fulled casing. Growted remaining hole: | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |

bedogic North Star Drilling Contractor

| WELL DECOMMISSIONING R                                             | ECORD                 | ·                         |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|--------------------------------------------------------------------|-----------------------|---------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 6'4 N                                                              | 2                     | W. II ID                  | 44 . 1.17               | 7 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |
| Site Name: Seneca Army Depot                                       |                       | Well ID: MW12-29          |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Site Location: SEAN 12                                             |                       | Driller: Scott Breeds     |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Drilling Company: Geologic North                                   | Star                  | Inspector: 5 4 th Dillman |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|                                                                    |                       | Date: 9                   | 14/10                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| DECOMMISSIONING E                                                  |                       | WELL SCHEMATIC*           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| (Fill in all that apply                                            | )                     | Depth                     | 2) 10                   | dep 16.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |
|                                                                    |                       | (feet)                    | 5 7                     | Toc to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |
| OVERDRILLING                                                       |                       | . 0                       | Rev                     | TOL to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |
| Interval Drilled                                                   |                       |                           |                         | \$ 50.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |
| Drilling Method(s)                                                 |                       |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Borehole Dia. (in.)                                                |                       |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Temporary Casing Installed? (y/n) Depth temporary casing installed |                       | 5                         |                         | Grut                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| Casing type/dia. (in.)                                             |                       |                           | - 100                   | - H H- 6100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |
| Method of installing                                               |                       |                           | pic                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| livieulou of instaining                                            |                       |                           | - 5011                  | The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon |  |  |
| CASING PULLING                                                     |                       |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Method employed                                                    | Great Pull Great      | 10                        |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Casing retrieved (feet)                                            | 16.8 ft               |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Casing type/dia. (in.)                                             | 2' PVC                |                           | -                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|                                                                    | - 1 V Com             |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| CASE PERFORATING                                                   |                       |                           |                         | Bottone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |
| Equipment used                                                     |                       | 15                        |                         | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |
| Number of perforations/foot                                        |                       |                           |                         | / well                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |
| Size of perforations                                               |                       |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Interval perforated                                                |                       |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| GROUTING                                                           |                       |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Interval grouted (FBLS)                                            | 1-17 0 81             |                           | -                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| # of batches prepared                                              | 1-13.864              |                           |                         | / /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |
| For each batch record:                                             |                       |                           |                         | NoT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| Quantity of water used (gal.)                                      | 18                    |                           |                         | Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |
| Quantity of cement used (lbs.)                                     | 2 9495                |                           |                         | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| Cement type                                                        | Toyle                 |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Quantity of bentonite used (lbs.)                                  | 1/10                  |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Quantity of calcium chloride used (lbs.)                           |                       |                           |                         | /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| Volume of grout prepared (gal.)                                    |                       |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Volume of grout used (gal.)                                        | 14                    |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|                                                                    |                       |                           | CHECKEN PROPERTY.       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| COMMENTS: Depth to water 10                                        | 1.7.5.5. 7.00         | * Sketch in all rele      | evant decommissionii    | ng data, including:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |
| Knokked ant end cap. Tremed                                        | casing fill of great. | interval overdrille       | d, interval grouted, ca |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|                                                                    | wring borchale with   | well stickup, etc.        |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| grout. Topped off hole with soi                                    |                       |                           |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |

| WELL DECOMMISSIONING I                                        | RECORD             | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | •                                         |
|---------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Site Name: Seneca Army S                                      | POT                | Well ID:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1012-30                                   |
| Site Location: 5EAD 12                                        | 0                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | cott Breeds                               |
| Drilling Company: Geologic Nort                               | In star            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ast Dillman                               |
|                                                               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4/10                                      |
| DECOMMISSIONING                                               | DATA               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | /ELL SCHEMATIC*                           |
| (Fill in all that app                                         |                    | Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ı                                         |
| 7,1                                                           | ~ <i>,</i>         | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | stickys 16.8                              |
| OVERDRILLING                                                  |                    | i D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | reveyed TO                                |
| Interval Drilled                                              |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - Soil                                    |
| Drilling Method(s)                                            |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| Borehole Dia. (in.)                                           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -                                         |
| Temporary Casing Installed? (y/n)                             |                    | <u></u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | - British I                               |
| Depth temporary casing installed                              |                    | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | well - Growt                              |
| Casing type/dia. (in.)                                        |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - Lugira 1                                |
| Method of installing                                          | L                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| CASING PULLING                                                |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| Method employed                                               | Grout All, Grout   | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <del> </del>                              |
| Casing retrieved (feet)                                       | 16.8 Feet          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| Casing type/dia. (in.)                                        | 2" (1)             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
|                                                               |                    | Sás.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |
| CASE PERFORATING                                              |                    | _                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Bottom                                    |
| Equipment used                                                |                    | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Tot 1                                     |
| Number of perforations/foot                                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | well                                      |
| Size of perforations                                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| Interval perforated                                           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
|                                                               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| GROUTING                                                      | 7                  | Minute in the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se |                                           |
| Interval grouted (FBLS)                                       | 1-19               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Not                                       |
| # of batches prepared                                         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - DRILLED                                 |
| For each batch record: Quantity of water used (gal.)          | 18                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | $ V_A$                                    |
| Quantity of water used (gal.)  Quantity of cement used (lbs.) | 25095              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>→</b>  /                               |
| Cement type                                                   | Type(              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | $\dashv$ $1/$                             |
| Quantity of bentonite used (lbs.)                             | 19/10              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| Quantity of calcium chloride used (lbs.)                      | 1                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| Volume of grout prepared (gal.)                               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| Volume of grout used (gal.)                                   | 14                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
|                                                               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| COMMENTS: Depth to water 9                                    | ,8 from TOC        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | vant decommissioning data, including      |
| Knock off end cap. Tremied as                                 |                    | interval overdrilled<br>well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | I, interval grouted, casing left in hole, |
| Pulled casing. Transed remai                                  | ning borehole with | wen stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                           |
| Growt. Added Soil to offer for                                | eT.                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |

Drilling Contractor

| WELL DECOMMISSIONING RI                  | ECORD              | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ,                                          |  |  |  |
|------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--|--|--|
| Site Name: Senega Army Depot             |                    | Well ID: MW 12-31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                            |  |  |  |
| Site Location: SEAN 12                   |                    | Driller: 5 cott Breeds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                            |  |  |  |
| Drilling Company: Geologic Nort          | a star             | Inspector: 540Tt Dillman                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                            |  |  |  |
| Drining Company. 6-Esta 12 10011         | ()                 | Date: 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 114/10                                     |  |  |  |
| PECON B (ICGIONIPIO P                    | A 775 A            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| DECOMMISSIONING D                        |                    | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | WELL SCHEMATIC*                            |  |  |  |
| (Fill in all that apply)                 | )                  | Depth<br>(feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | stickers 13                                |  |  |  |
| OVERDRILLING                             |                    | (1001)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | removed Top to                             |  |  |  |
| Interval Drilled                         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - Soil                                     |  |  |  |
| Drilling Method(s)                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Borehole Dia. (in.)                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Temporary Casing Installed? (y/n)        |                    | - Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | pulled forout                              |  |  |  |
| Depth temporary casing installed         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | J PNC / 1                                  |  |  |  |
| Casing type/dia. (in.)                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Method of installing                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | well !                                     |  |  |  |
| CASING PULLING                           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Method employed                          | Grant, Bell Grant  | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |  |  |  |
| Casing retrieved (feet)                  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Casing type/dia. (in.)                   | 13 ft<br>2 PVC     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Casing type/dia. (iii.)                  | 2 PVC              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| CASE PERFORATING                         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Equipment used                           |                    | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |  |  |  |
| Number of perforations/foot              |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <del></del>                                |  |  |  |
| Size of perforations                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Interval perforated                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| GROUTING                                 |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Interval grouted (FBLS)                  | \$-10f+            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <del> </del>                               |  |  |  |
| # of batches prepared                    | 1000               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <del> </del>                               |  |  |  |
| For each batch record:                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Quantity of water used (gal.)            | 18                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | _                                          |  |  |  |
| Quantity of cement used (lbs.)           | ZGags              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Cement type                              | Tuest              | MICHAEL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTRO |                                            |  |  |  |
| Quantity of bentonite used (lbs.)        | 19/10              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Quantity of calcium chloride used (lbs.) |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Volume of grout prepared (gal.)          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| Volume of grout used (gal.)              | 10 gallens         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| COMMENTS: A & b                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |
| COMMENTS: Depth to water = 8.5           | trum TOC           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | levant decommissioning data, including:    |  |  |  |
|                                          | carney with Grouts | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ed, interval grouted, casing left in hole, |  |  |  |
|                                          | 2 maining boring   | Stronap, ctc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                            |  |  |  |
| Added soil on top.                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |  |  |

Geologic North Star

| WELL DECOMMISSIONING REC                                           | ORD               |                           |                              |        |                 |            |       |
|--------------------------------------------------------------------|-------------------|---------------------------|------------------------------|--------|-----------------|------------|-------|
| Site Name: Seneca Army Depot                                       | ana.              | Wel                       | ll ID:                       | MWI    | 2-32            |            |       |
| Site Location: 5EAA 12                                             |                   | Driller: Sept Breads      |                              |        |                 |            |       |
|                                                                    | Star              | Inspector: Scatt Dillinan |                              |        |                 |            |       |
|                                                                    |                   | Dat                       | 7                            | 14/10  |                 |            |       |
| DECOMMISSIONING DAT                                                | A                 |                           |                              | WELL S | CHEMATIC        | _*         |       |
| (Fill in all that apply)                                           |                   | Dep                       |                              |        | ~ <i>(</i>      |            | 121   |
|                                                                    |                   | (fee                      |                              |        | 2.1             |            | 1201  |
| OVERDRILLING                                                       |                   | C)106-15                  | <u>. O</u>                   |        | stick-/         | 2          | TO TO |
| Interval Drilled                                                   |                   |                           |                              |        |                 |            | 501   |
| Drilling Method(s)                                                 |                   |                           |                              |        | 91              |            | -     |
| Borehole Dia. (in.)                                                |                   |                           |                              |        |                 |            |       |
| Temporary Casing Installed? (y/n) Depth temporary casing installed |                   |                           | 5                            |        | puled           |            | Grant |
| Casing type/dia. (in.)                                             |                   | -                         |                              | -      | ~               | 1          |       |
| Method of installing                                               |                   |                           |                              | -      | 100             |            |       |
| Land of instanting                                                 |                   |                           |                              |        | well            |            |       |
| CASING PULLING                                                     |                   |                           | 10                           |        | -               |            |       |
| Method employed                                                    | prout Pull, broat |                           | 10                           |        |                 |            |       |
| Casing retrieved (feet)                                            | 13.1 Ft           |                           |                              |        |                 | 4          | 7     |
| Casing type/dia. (in.)                                             | 2" PUC            |                           |                              |        |                 |            |       |
| CAGE PERSON ATTING                                                 |                   |                           |                              |        |                 |            |       |
| CASE PERFORATING                                                   |                   |                           | 15                           |        |                 |            |       |
| Equipment used Number of perforations/foot                         | <del>4</del>      |                           |                              |        |                 |            |       |
| Size of perforations                                               |                   |                           |                              |        | -               |            |       |
| Interval perforated                                                |                   |                           |                              |        |                 |            |       |
|                                                                    |                   |                           |                              |        |                 |            |       |
| GROUTING                                                           |                   |                           |                              |        |                 |            |       |
| Interval grouted (FBLS)                                            | 1-10.4            |                           |                              |        |                 |            |       |
| # of batches prepared                                              |                   |                           |                              |        |                 |            |       |
| For each batch record:                                             | . 0               |                           |                              |        |                 |            |       |
| Quantity of water used (gal.) Quantity of cement used (lbs.)       | 18                |                           |                              |        |                 |            |       |
| Cement type                                                        | 7 6095            |                           |                              |        |                 |            |       |
| Quantity of bentonite used (lbs.)                                  | 14/0              |                           |                              |        |                 |            |       |
| Quantity of calcium chloride used (lbs.)                           | 10 gounds         |                           |                              |        |                 |            |       |
| Volume of grout prepared (gal.)                                    |                   |                           |                              | -      |                 |            |       |
| Volume of grout used (gal.)                                        | 11 861            |                           |                              |        |                 |            |       |
|                                                                    |                   |                           |                              |        | ı               |            | •     |
| COMMENTS: Depth to water = 7.76                                    | o ft. from TOC    |                           |                              |        | mmissioning da  |            |       |
| 4 11 0                                                             | casing with       |                           | val overdril<br>stickup, etc |        | grouted, casing | left in ho | ole,  |
|                                                                    | inaikivej         | well                      | заскир, етс                  | •      |                 |            |       |
| Sorehole Torred off with s                                         | 611.              |                           |                              |        |                 |            |       |

Geologic North Star

Drilling Contractor

| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                   |                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: SENECH ARMY DEPOT                                                                                                                                                                                                                  | Well ID: MW12-35                                                                                                                          |
| Site Location: SEAD 12                                                                                                                                                                                                                        | Driller: Scott Breeds                                                                                                                     |
| Drilling Company: Geologic North Star                                                                                                                                                                                                         | Inspector: Scott Dillman                                                                                                                  |
| J                                                                                                                                                                                                                                             | Date: 9/13//0                                                                                                                             |
| DECOMMISSIONING DATA                                                                                                                                                                                                                          | WELL SCHEMATIC*                                                                                                                           |
| (Fill in all that apply)                                                                                                                                                                                                                      | Denth                                                                                                                                     |
| OVERDRILLING Interval Drilled Drilling Method(s)                                                                                                                                                                                              | Depth (feet)  Stick up  2.3  Removed  Removed  From Toc  TO TD  Co-41/19  Removed  Soll                                                   |
| Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing                                                                                                            | 10 GROUT                                                                                                                                  |
| CASING PULLING Method employed Casing retrieved (feet) Casing type/dia. (in.)                                                                                                                                                                 | ZO DO DO DO DENTANTA                                                                                                                      |
| CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated                                                                                                                                          | 30 Sand                                                                                                                                   |
| GROUTING - G-ROUT IN PLACE Interval grouted (FBLS) # of batches prepared  For each botch record.                                                                                                                                              | HO Beton                                                                                                                                  |
| For each batch record:  Quantity of water used (gal.)  Quantity of cement used (lbs.)  Cement type  Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.)  Volume of grout used (gal.) | DRILLED                                                                                                                                   |
| COMMENTS: Depth to water 13.4 ft. from TOC<br>Tremise growted casing to ~3.ft.<br>Dig out offer casing and stickup.<br>Backfill offer hole with soil.                                                                                         | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |

Geologic North Star

Drilling Contractor

| WELL DECOMMISSIONING RECORD                                 |                                                                                                                        |
|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Site Name: Sereca Army Depot                                | Well ID: MW12-38                                                                                                       |
| Site Location: $5 \in A \cap 12$                            | Driller: 5 cott Breeds                                                                                                 |
| Drilling Company: Geologic North Star                       | Inspector: Scott Dillman                                                                                               |
|                                                             | Date: 9//4//0                                                                                                          |
| DECOMMISSIONING DATA                                        | WELL SCHEMATIC*                                                                                                        |
| (Fill in all that apply)                                    | Depth                                                                                                                  |
| (I iii iii dia dad app.j)                                   | 1 d                                                                                                                    |
| OVERDRILLING                                                | (feet) o flush 10.5                                                                                                    |
| Interval Drilled                                            | Filled                                                                                                                 |
| Drilling Method(s)                                          | - Sox too                                                                                                              |
| Borehole Dia. (in.)                                         | - $        -$                                                                                                          |
| Temporary Casing Installed? (y/n)                           | - Pulled 1 + To.                                                                                                       |
| Depth temporary casing installed                            | - Syrtage                                                                                                              |
| Casing type/dia. (in.)                                      | - Pro 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                                                                            |
| Method of installing                                        | - uell                                                                                                                 |
| CASING PULLING                                              |                                                                                                                        |
| Method employed (6 rest. feet)                              | 10 - 10 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                                                                                |
| Casing retrieved (feet)                                     | Buttone                                                                                                                |
| Casing type/dia. (in.)                                      | of Well                                                                                                                |
|                                                             |                                                                                                                        |
| <u>CASE PERFORATING</u>                                     | -   -   //l                                                                                                            |
| Equipment used                                              |                                                                                                                        |
| Number of perforations/foot                                 | -   wet.                                                                                                               |
| Size of perforations                                        | - DRILLED                                                                                                              |
| Interval perforated                                         |                                                                                                                        |
| GROUTING                                                    |                                                                                                                        |
| Interval grouted (FBLS)                                     |                                                                                                                        |
| # of batches prepared                                       | 7 1 7 1/1                                                                                                              |
| For each batch record:                                      |                                                                                                                        |
| Quantity of water used (gal.)                               |                                                                                                                        |
| Quantity of cement used (lbs.) 2 5095                       |                                                                                                                        |
| Cement type                                                 |                                                                                                                        |
| Quantity of bentonite used (lbs.)                           | $\dashv$ $\mid$ $\mid$ $\mid$ $\mid$                                                                                   |
| Quantity of calcium chloride used (lbs.)                    | $\dashv$ $\mid$ $\mid$ $\mid$ $\mid$ $\mid$                                                                            |
| Volume of grout prepared (gal.) Volume of grout used (gal.) | -                                                                                                                      |
| Volume of grout used (gal.)                                 |                                                                                                                        |
| COMMENTS: Death be water 4.64 from Too                      | * Chatch is all relevant decomplished at a include.                                                                    |
|                                                             | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, |
| bush filling berefule with great to new                     | well stickup, etc.                                                                                                     |
|                                                             | ox liet back on.                                                                                                       |
|                                                             |                                                                                                                        |

| WELL DECOMMISSIONING RECORD                                                                                                                  | ,                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: Seneca Army Depot                                                                                                                 | Well ID: MW12-39                                                                                                                          |
| Site Location: $5 \in A \setminus A \setminus A \setminus A \setminus A \setminus A \setminus A \setminus A \setminus A \setminus A$         | Driller: 5 with Breeds                                                                                                                    |
| Drilling Company: 6-ealogic Worth Star                                                                                                       | Inspector: 545H Dillman                                                                                                                   |
|                                                                                                                                              | Date: 9/14/10                                                                                                                             |
| DECOMMISSIONING DATA                                                                                                                         | WELL SCHEMATIC*                                                                                                                           |
| (Fill in all that apply)                                                                                                                     | Depth FLUSH + Toch                                                                                                                        |
| OVERDRILLING Interval Drilled                                                                                                                | (feet) Mount To 10,2'                                                                                                                     |
| Drilling Method(s)                                                                                                                           | - box too                                                                                                                                 |
| Borehole Dia. (in.)                                                                                                                          | at6 out                                                                                                                                   |
| Temporary Casing Installed? (y/n) Depth temporary casing installed                                                                           | 5 - 1 1 10                                                                                                                                |
| Casing type/dia. (in.)                                                                                                                       | - Bulled Surface                                                                                                                          |
| Method of installing                                                                                                                         | well.                                                                                                                                     |
|                                                                                                                                              | ciu sing                                                                                                                                  |
| CASING PULLING                                                                                                                               |                                                                                                                                           |
| Method employed 6 rust for 1,6 sof                                                                                                           |                                                                                                                                           |
| Casing retrieved (feet)                                                                                                                      | Botton                                                                                                                                    |
| Casing type/dia. (in.)                                                                                                                       | - Jos Well                                                                                                                                |
| CASE PERFORATING                                                                                                                             |                                                                                                                                           |
| Equipment used                                                                                                                               | 15 -                                                                                                                                      |
| Number of perforations/foot                                                                                                                  |                                                                                                                                           |
| Size of perforations                                                                                                                         | Not                                                                                                                                       |
| Interval perforated                                                                                                                          |                                                                                                                                           |
| GROUTING                                                                                                                                     | ARTHE                                                                                                                                     |
| Interval grouted (FBLS) $0 - 10.2$                                                                                                           |                                                                                                                                           |
| # of batches prepared                                                                                                                        |                                                                                                                                           |
| For each batch record:                                                                                                                       |                                                                                                                                           |
| Quantity of water used (gal.)                                                                                                                |                                                                                                                                           |
| Quantity of cement used (lbs.)                                                                                                               |                                                                                                                                           |
| Cement type  Quantity of bentonite used (lbs.)                                                                                               |                                                                                                                                           |
| Quantity of bentome used (lbs.)  Quantity of calcium chloride used (lbs.)                                                                    |                                                                                                                                           |
| Volume of grout prepared (gal.)                                                                                                              |                                                                                                                                           |
| Volume of grout used (gal.)  10 gal                                                                                                          |                                                                                                                                           |
|                                                                                                                                              |                                                                                                                                           |
| COMMENTS: Depth to water 2, 8 Ft from Tac<br>Knocked out and cap. Filled Casing with grout.<br>Pulled casing. Filled remaining borehold with | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |
| Replace flush mount cover                                                                                                                    |                                                                                                                                           |

Department Representative

| WELL DECOMMISSIONING R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ECORD             | •                                                |                                                             | •            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------|-------------------------------------------------------------|--------------|
| Site Name: Seneca Army A.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | epot              | Well ID:                                         | MW12-40                                                     | 0            |
| Site Location: SEAD 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 7                 | Driller:                                         | Scott Breed                                                 |              |
| Drilling Company: Geologic North                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | - Star            | Inspector:                                       | Scott Dilla                                                 |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | <del>                                     </del> | 1/14/10                                                     |              |
| DECOMMISSIONING I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ) A T A           |                                                  | WELL SCHEMATI                                               | O#           |
| (Fill in all that apply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                   | Depth                                            |                                                             | 24           |
| (i iii iii ali tilat appiy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | )                 | (feet)                                           | stickup 3                                                   | 1 17° puc    |
| OVERDRILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   | 10                                               | removed                                                     | A DID        |
| Interval Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                                                  |                                                             | 47501        |
| Drilling Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                  |                                                             |              |
| Borehole Dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                                                  |                                                             | Grout        |
| Temporary Casing Installed? (y/n)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                                                  | 110                                                         | 4            |
| Depth temporary casing installed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   | 5                                                | 90110                                                       |              |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                                                  | 075                                                         |              |
| Method of installing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   | -                                                | = puc<br>well                                               |              |
| CASING PULLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |                                                  |                                                             | // //        |
| Method employed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.1911            | 10                                               |                                                             |              |
| Casing retrieved (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Grant, Pull Grant |                                                  |                                                             | Bottom       |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 13.4 FT           |                                                  |                                                             | 1 OF Wall    |
| Casing typerdia. (iii.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2 /02             |                                                  |                                                             |              |
| CASE PERFORATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                                                  |                                                             |              |
| Equipment used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   | 15                                               |                                                             |              |
| Number of perforations/foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                                                  | -                                                           |              |
| Size of perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                                                  |                                                             |              |
| Interval perforated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                                                  | -                                                           |              |
| The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |                   |                                                  |                                                             | NOT          |
| GROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                                                  |                                                             | Do. Hed      |
| Interval grouted (FBLS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1-10.4            |                                                  |                                                             | 1 2.112      |
| # of batches prepared                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                                                  |                                                             | 1            |
| For each batch record:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                                                  |                                                             | Y = 1        |
| Quantity of water used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | _18               |                                                  |                                                             |              |
| Quantity of cement used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2_                |                                                  |                                                             |              |
| Cement type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Type I Par Hand   |                                                  |                                                             |              |
| Quantity of bentonite used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10                |                                                  |                                                             | $V_{\perp}$  |
| Quantity of calcium chloride used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                                                  |                                                             |              |
| Volume of grout prepared (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                  |                                                             | 1/1          |
| Volume of grout used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 10 gal            |                                                  |                                                             |              |
| COMMENTS: Death to water 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | e8 ft. For Toc    |                                                  |                                                             |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                  | elevant decommissioning da<br>led, interval grouted, casing |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 /4 )            | well stickup, etc.                               |                                                             | ien in noie, |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ited remaining    | , , , , ,                                        |                                                             |              |
| surehole with growt. Topped iff                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | with soils        |                                                  |                                                             |              |

beologic North Star

Drilling Contractor

| Site Name: Seneca from Apport  Site Location: SEAD / 3  Drilling Company: Gredage Worth Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Dispension of the Star Inspector: Set the Di | WELL DECOMMISSIONING RECORD             |                                          |
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| Site Location: SCAN 3  Drilling Company: Geologic North Star Inspector: Scatt Bright Scant Date: 9/15/CO  DECOMMISSIONING DATA (Fill in all that apply)  OVERDRILLING  Interval Drilled  Depth (feet)  OVERDRILLING  Interval proving casing installed  Casing type/dia. (in.)  Method of installing  CASING PULLING  Method of installing  CASING PULLING  Method of installing  CASING PULLING  Method of proving casing installed  Casing type/dia. (in.)  CASE PERFORATING  Equipment used  Casing type/dia. (in.)  CASE PERFORATING  Equipment used  GROUTING  Interval grouted (FBLS)  # of batches prepared  For each batch record:  Countity of water used (gls.)  Quantity of cement used (lbs.)  Quantity of bentonite used (lbs.)  Quantity of bentonite used (lbs.)  Volume of grout prepared (gal.)  Volume of grout prepared (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  Knocked out and plang - Cocated Casturg with grout interval grouted, casing left in hole, water used interval grouted, casing left in hole; water used interval grouted, casing left in hole; water used controlled, interval grouted, casing left in hole; water used used interval grouted, casing left in hole; water used used controlled, interval grouted, casing left in hole; water used used controlled, interval grouted, casing left in hole; water used used used used used used used used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Site Name: Sen Sec Acons Asast          | Well ID: MW13-1                          |
| Drilling Company: Geologic Worth Star Date: 915/0  DECOMMISSIONING DATA (Fill in all that apply)  OVERDRILLING Interval Drilled Drilling Method(s) Borchole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing  CASING PULLING Method of mistalling  CASING PULLING Method of mistalling  CASING PULLING Method of perforations Interval protection of the perforations of the perforations of the perforations of the perforations of the perforations of the perforations of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perforation of the perfora |                                         |                                          |
| Date: 9 15 10  Decommissioning data  (Fill in all that apply)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  (feet)  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth  Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth Depth D |                                         |                                          |
| DECOMMISSIONING DATA (Fill in all that apply)  OVERDRILLING Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing  CASING PULLING Method employed Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of ement used (lbs.) Cement type Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout prepared (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout prepared ( | Drilling Company: 6-edo gic worth ) far | 7 7                                      |
| (Fill in all that apply)  OVERDRILLING Interval Drilled Drilling Method(s) Borehole Dia. (in.)  Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.)  Method of installing  CASING PULLING Method employed Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cenent used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout used (gal.)  COMMENTS: Perform Toward Casing with Aperton  * Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, we have the prepared to the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of th |                                         |                                          |
| OVERDRILLING Interval Drilled Drilling Method(s) Borehole Dia. (in.) Depth temporary casing installed Casing type/dia. (in.) Method of installing CASING PULLING Method employed Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of water used (gls.) Quantity of calcium chloride used (lbs.) Volume of grout used (gls.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.)  COMMENTS: Depth to use of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of th |                                         |                                          |
| OVERDRILLING Interval Drilled Drilling Method(s) Borchole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing  CASING PULLING Method of installing  CASING PULLING Method employed Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared # of each batch record: Quantity of water used (gal.) Quantity of vater used (gal.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout used (gal.)  COMMENTS: Depth to water = 7.5 It we can be a few to the perforance in including: interval grouted, casing left in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole, with the perforance in hole,  | (Fill in all that apply)                |                                          |
| Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing  CASING PULLING Method employed Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of centent used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.)  COMMENTS: Depth to use of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of th | OVERDRIVA IN CO.                        | (reet) CLUST 9 TOC TOTA                  |
| Drilling Method(s) Borchole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing  CASING PULLING Method employed Grant full, Grant Casing retrieved (feet) Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout used (gal.) Volume of grout used (gal.)  COMMENTS: Depth to water = 1.5 ATM from Text Know Kell and relevant decommissioning data, including: interval overtilled, interval grouted, casing left in hole, well sticken etc.  * Sketch in all relevant decommissioning data, including: interval overtilled, interval grouted, casing left in hole, well sticken etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                         |                                          |
| Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing  CASING PULLING Method employed Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.)  COMMENTS: Depth to prefer 2-1-5 ATW Proc Test Kreen Kell at t and plug Leaded Casing with question and interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, casing left in hole, well sticking for interval grouted, c |                                         | 30:1                                     |
| Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing  CASING PULLING Method employed Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of ement used (lbs.) Cement type Quantity of bentonite used (lbs.) Volume of grout used (gal.) Volume of grout used (gal.)  COMMENTS: Depth to instart = 7.5 ATW PM TCS KNew Kell out and plug cooled casing out the apout.  * Sketch in all relevant decommissioning data, including interval grouted, casing left in hole, well disjoint network grout used.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                         |                                          |
| Depth temporary casing installed Casing type/dia. (in.) Method of installing  CASING PULLING Method employed Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.)  COMMENTS: Depth to is after 3.5 ATW Pew Too  Knew Keel out and plug Coacled Casing of the prepared interval grouted, casing left in hole, well disjoin after a grouted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                         | <del>-</del>                             |
| Casing type/dia. (in.)  Method of installing  CASING PULLING  Method employed  Casing retrieved (feet)  Casing type/dia. (in.)  CASE PERFORATING  Equipment used  Number of perforations  Interval perforated  GROUTING  Interval grouted (FBLS)  # of batches prepared  For each batch record:  Quantity of water used (gal.)  Quantity of bentonite used (lbs.)  Cement type  Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.)  Volume of grout used (gal.)  COMMENTS: Death to prepared  For Manual Commissioning data, including interval grouted, casing usith a result in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the large used in the  |                                         | 5 - 1 11                                 |
| Method of installing  CASING PULLING  Method employed  Casing retrieved (feet)  Casing type/dia. (in.)  CASE PERFORATING  Equipment used  Number of perforations/foot  Size of perforations  Interval protect (FBLS)  # of batches prepared  For each batch record:  Quantity of water used (gal.)  Quantity of bentonite used (lbs.)  Cement type  Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.)  Volume of grout used (gal.)  COMMENTS: Degth to water = 7.5 ATW Prov Text  Kracked out and bug Coading with great and legically in the lateral protection are related to the provided in the lateral protection and the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protection and the lateral protection are related to the lateral protect |                                         |                                          |
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| Equipment used  Number of perforations/foot  Size of perforations  Interval perforated  GROUTING  Interval grouted (FBLS)  # of batches prepared  For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.)  Cement type Quantity of calcium chloride used (lbs.)  Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.)  Volume of grout used (gal.)  * Sketch in all relevant decommissioning data, including: interval overline and plage legals as interval overline and interval grouted, casing left in hole, well sticking etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CASE PERFORATING                        | 1 0 4                                    |
| Number of perforations/foot Size of perforations Interval perforated  GROUTING Interval grouted (FBLS)  # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.)  COMMENTS: Degth to water = 7.5 ATW from Too  Kynaked out and plug - Loaded casing with grout well sticking ate.  *Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well sticking ate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                         | 15 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ |
| Size of perforations Interval perforated  GROUTING Interval grouted (FBLS)  # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.)  *Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well sticking etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                         |                                          |
| Interval perforated  GROUTING Interval grouted (FBLS)  # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.)  Cement type Quantity of bentonite used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.)  COMMENTS: Degth to water = 7.5 ATW from Too Krocked out end plage Loaded casing with grout interval overdrilled, interval grouted, casing left in hole, well sticking etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                         |                                          |
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| Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.)  *Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | GROUTING                                | 20                                       |
| For each batch record:  Quantity of water used (gal.)  Quantity of cement used (lbs.)  Cement type  Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.)  Volume of grout used (gal.)  COMMENTS: Deft to water = 7.5 ATW from Tax  * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Interval grouted (FBLS)                 |                                          |
| Quantity of water used (gal.)  Quantity of cement used (lbs.)  Cement type  Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.)  Volume of grout used (gal.)  COMMENTS: Depth to water = 7.5 DTw from Tex  Knocked out and pluge Loaded casing with grout.  * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                         |                                          |
| Quantity of cement used (lbs.)  Cement type  Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.)  Volume of grout used (gal.)  COMMENTS: Depth to water = 7.5 ATW from Test  Knocked out and plug Loaded casing with grout.  *Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                         |                                          |
| Comment type  Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.)  Volume of grout used (gal.)  COMMENTS: Depth to water = 7.5 ATW from Tec.  Knocked out and pluge Loaded casing with grout.  *Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ( ) /                                   | Drilled                                  |
| Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.)  Volume of grout used (gal.)  COMMENTS: Depth to water = 7.5 ATW from Tea  * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                         |                                          |
| Volume of grout prepared (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  *Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well sticking etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Cement type Type I Portland             |                                          |
| Volume of grout prepared (gal.)  Volume of grout used (gal.)  COMMENTS: Degth to water = 7.5 ATW from Too  * Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                         | /                                        |
| COMMENTS: Depth to water = 7.5 ATW from Tes  * Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well sticking etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                         |                                          |
| COMMENTS: Depth to water = 7.5 DTW from Tec   * Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well sticking etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                         | <b>─</b>                                 |
| Knocked out and plug. Loaded casing with grout. interval overdrilled, interval grouted, casing left in hole, well sticking etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Volume of grout used (gal.)             |                                          |
| Knocked out and plug. Loaded casing with grout. interval overdrilled, interval grouted, casing left in hole, well sticking etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | COMPARTMENT A ALL LAND THE ATTENTION TO |                                          |
| well sticking to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                         |                                          |
| Tulled casing. Viouted remaining boreable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                         |                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | TUILED Casing, browning gore cole.      |                                          |

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING RE                      | CORD                                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| Site Name: Seneca Army Dep                   | ot                                    |                                           | MW13-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Site Location: SEAD 13                       |                                       | Driller: 5 a                              | oth Breeds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Drilling Company: Geologic North             | Star                                  |                                           | att Oillnan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                              |                                       | Date: 9/                                  | 15/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| DECOMMISSIONING DA                           | ТА                                    |                                           | VELL SCHEMATIC*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| (Fill in all that apply)                     |                                       | Denth                                     | Removed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| (1 m m an and apply)                         |                                       | (feet)                                    | 2.4   18.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| OVERDRILLING                                 |                                       | 0                                         | STICKUP TOC TOTAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Interval Drilled                             |                                       |                                           | 56:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Drilling Method(s)                           |                                       |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Borehole Dia. (in.)                          |                                       |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Temporary Casing Installed? (y/n)            |                                       | 7                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Depth temporary casing installed             |                                       |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Casing type/dia. (in.)                       |                                       |                                           | - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And - And |
| Method of installing                         |                                       |                                           | - Grout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                              |                                       |                                           | - Pulled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CASING PULLING                               | ,                                     | 10                                        | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Method employed                              | Great Pull Great                      |                                           | 0.16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Casing retrieved (feet)                      | 18,4                                  |                                           | - PUC Casing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Casing type/dia. (in.)                       | 2' PVC                                |                                           | (asim)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| CAGE PERFORATING                             |                                       |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| CASE PERFORATING                             |                                       | 15                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Equipment used                               |                                       | 1                                         | Physicanic Company (1974)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Number of perforations/foot                  |                                       |                                           | Botton                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Size of perforations                         |                                       |                                           | - 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Interval perforated                          |                                       |                                           | - Well                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| GROUTING                                     |                                       | 20                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Interval grouted (FBLS)                      | 1-16ft                                | -                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| # of batches prepared                        | 1                                     |                                           | - 1/1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| For each batch record:                       | Lancing and the second                |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Quantity of water used (gal.)                | 18                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Quantity of cement used (lbs.)               | 2 5095                                |                                           | 261                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Cement type                                  | Type                                  |                                           | Scilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Quantity of bentonite used (lbs.)            | 10'                                   |                                           | Brille                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Quantity of calcium chloride used (lbs.)     |                                       |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Volume of grout prepared (gal.)              |                                       |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Volume of grout used (gal.)                  | 16 998                                |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| fy                                           | · · · · · · · · · · · · · · · · · · · |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| COMMENTS: Depth to water = DTW               | 5.25 Am TOC                           |                                           | evant decommissioning data, including                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Knocked out and cap. Loaded well with groute |                                       | interval overdrille<br>well stickup, etc. | d, interval grouted, casing left in hole,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Pulled casing. Growted ren                   | raining borehole                      | wen stickup, etc.                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Add soil on top.                             | J                                     |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING R                                        | ECORD                |                                         |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------|----------------------|-----------------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: Stneca Army 1                                      | )epst                | Well ID:                                | MW13-3                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Location: 5EAD 13                                        |                      | Driller: 5                              | cott Breeds                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                               | Star                 | Inspector: 5                            |                                         | _                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 2.mmg company. C 1/2                                          |                      | Date: 9/                                | 15/10                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DECOMMISSIONING                                               | DATA                 |                                         | WELL SCHEMATION                         | C*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| (Fill in all that apply                                       |                      | Depth                                   | MELL SCILLIVIATION AL                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| (1 iii iii aii that appi                                      | <i>,</i>             | (feet)                                  | 29                                      | 1 26.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| OVERDRILLING                                                  |                      | 0                                       | Theleve                                 | 26.4<br>TOP-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Interval Drilled                                              |                      |                                         |                                         | T Tool                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Drilling Method(s)                                            |                      |                                         |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Borehole Dia. (in.)                                           |                      |                                         |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Temporary Casing Installed? (y/n)                             |                      | 5                                       |                                         | * Transcription                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Depth temporary casing installed                              |                      | )                                       |                                         | distribution of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of th |
| Casing type/dia. (in.)                                        |                      |                                         | *************************************** | Growt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Method of installing                                          |                      |                                         | - 0 1/e                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CASING PULLING                                                |                      | 1                                       | Poiled<br>puc<br>well                   | <del> </del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Method employed                                               | Grout Pull Grant     | 10                                      | - puc                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing retrieved (feet)                                       | 73.5 C+              | *************************************** | (Jell                                   | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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Geologic North Star

Drilling Contractor

#### WELL DECOMMISSIONING RECORD Seneca Well ID: Site Name: Scott Breeds SEA D Driller: Site Location: Drilling Company: Inspector: Date: 116/10 **DECOMMISSIONING DATA** WELL SCHEMATIC\* (Fill in all that apply) Depth 2.6 (feet) stick up Rumoved OVERDRILLING Interval Drilled Soil Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Grout Casing type/dia. (in.) PUC Method of installing WELL CASING PULLING 10 Method employed Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING 15 Equipment used Number of perforations/foot BOTTOM Size of perforations 08 Interval perforated Well 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) 30 Volume of grout used (gal.) COMMENTS: Depth to water = 8.52 ft from TOC \* Sketch in all relevant decommissioning data, including: with grout. interval overdrilled, interval grouted, casing left in hole. well stickup, etc.

Geologic North Star

**Drilling Contractor** 

| WELL DECOMMISSIONING  <br>                                                                   | RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| volume of grout used (gai.)                                                                  | I gal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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                                                                                                                                                                                                                                                                                           |
| COMMENTS: Depth to water =                                                                   | 7.3 ft from TOC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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                                                                                                                                              | * Sketch in all re                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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                                                                                                                                                                                                                                            | ta, including:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Knocked out end cap. Loaded casing with grout.<br>Pulled casing. Growted remaining borehole. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | interval overdrilled, interval grouted, casing left in hole, well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Added soil on top.                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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Geologic North Star

Drilling Contractor

| WELL DECOMMISSIONING RECORD                           |                                                               |
|-------------------------------------------------------|---------------------------------------------------------------|
| Site Name: Jeneca Army Depot                          | Well ID: MW13-7                                               |
| Site Location: SEAD 13                                | Driller: 5 cott Breeds                                        |
| Drilling Company: Geologic North Star                 | Inspector: Seath Dillman                                      |
| 3                                                     | Date: 5 /15/10                                                |
| DECOMMISSIONING DATA                                  | WELL SCHEMATIC*                                               |
| (Fill in all that apply)                              | Depth                                                         |
| (2 22 23 24 25 27 27 27 27 27 27 27 27 27 27 27 27 27 | (feet) 2.8 (0.6                                               |
| <u>OVERDRILLING</u>                                   | (TEET) 10.6 TOP TO TO                                         |
| Interval Drilled                                      | 1 + 501                                                       |
| Drilling Method(s)                                    |                                                               |
| Borehole Dia. (in.)                                   |                                                               |
| Temporary Casing Installed? (y/n)                     | puled of Gout                                                 |
| Depth temporary casing installed                      | 5 - NC 1 =1                                                   |
| Casing type/dia. (in.)                                | - well                                                        |
| Method of installing                                  | <del></del>                                                   |
|                                                       | - 7.8 Well postor                                             |
| CASING PULLING                                        | 17) bottom                                                    |
| Method employed                                       |                                                               |
| Casing retrieved (feet)                               |                                                               |
| Casing type/dia. (in.)                                | -                                                             |
| CACE PERSONATING                                      |                                                               |
| CASE PERFORATING                                      | $\sim 1.15 - 1.1$                                             |
| Equipment used                                        |                                                               |
| Number of perforations/foot Size of perforations      |                                                               |
| Interval perforated                                   |                                                               |
| Interval perforated                                   | - Not                                                         |
| GROUTING                                              |                                                               |
| Interval grouted (FBLS)                               | DRILLED                                                       |
| # of batches prepared                                 |                                                               |
| For each batch record:                                |                                                               |
| Quantity of water used (gal.)                         |                                                               |
| Quantity of cement used (lbs.)                        |                                                               |
| Cement type                                           |                                                               |
| Quantity of bentonite used (lbs.)                     |                                                               |
| Quantity of calcium chloride used (lbs.)              |                                                               |
| Volume of grout prepared (gal.)                       |                                                               |
| Volume of grout used (gal.)                           |                                                               |
| COMMENTS. D. M. 1. 16                                 | A Closel in all relevant days are included in all all and     |
| COMMENTS: Death to water = 7.55 from I                | internal accordability distanced assured assigns left in hole |
| Runked off and cap. Loaded Casing with grout          | well stickup, etc.                                            |
| Pulled casing. Growted remaining borehole.            |                                                               |

Geologic North Star-Drilling Contractor

| WELL DECOMMISSIONING R                   | ECORD            |                    | •                                          |
|------------------------------------------|------------------|--------------------|--------------------------------------------|
| Site Name:                               |                  | Well ID:           | MW13-9                                     |
| Site Location:                           |                  | Driller:           |                                            |
| Drilling Company:                        |                  | Inspector:         |                                            |
|                                          |                  | Date:              |                                            |
| DECOMMISSIONING D                        | OATA             | ,                  | WELL SCHEMATIC*                            |
| (Fill in all that apply                  | )                | Depth              | 14 1165                                    |
| OVERDRILLING                             |                  | (feet)             | Stick of Toc to                            |
| Interval Drilled                         |                  |                    | 561                                        |
| Drilling Method(s)                       |                  |                    |                                            |
| Borehole Dia. (in.)                      |                  |                    |                                            |
| Temporary Casing Installed? (y/n)        |                  | 5                  | Grant                                      |
| Depth temporary casing installed         |                  |                    |                                            |
| Casing type/dia. (in.)                   |                  |                    | - pulled                                   |
| Method of installing                     |                  |                    | - puc                                      |
| CASING PULLING                           |                  |                    | well                                       |
| Method employed                          | Grant P.M. Grant | 10                 | We'll                                      |
| Casing retrieved (feet)                  | 16:2 +           |                    |                                            |
| Casing type/dia. (in.)                   | PVC 2"           |                    |                                            |
| CASE PERFORATING                         |                  |                    |                                            |
| Equipment used                           |                  | 15                 | Bottom                                     |
| Number of perforations/foot              |                  |                    | of.,                                       |
| Size of perforations                     |                  |                    | - well                                     |
| Interval perforated                      |                  |                    |                                            |
| GROUTING                                 |                  | 20                 | -                                          |
| Interval grouted (FBLS)                  | 1-14.88          |                    |                                            |
| # of batches prepared                    |                  |                    |                                            |
| For each batch record:                   |                  |                    |                                            |
| Quantity of water used (gal.)            | 18               |                    |                                            |
| Quantity of cement used (lbs.)           | 2 54,5           |                    |                                            |
| Cement type                              | Type             |                    |                                            |
| Quantity of bentonite used (lbs.)        | 10               |                    |                                            |
| Quantity of calcium chloride used (lbs.) |                  |                    |                                            |
| Volume of grout prepared (gal.)          |                  |                    |                                            |
| Volume of grout used (gal.)              | 15 gal           |                    |                                            |
| COMMENTS: Beath to water =               | 6 ft, fam TOC    | * Sketch in all re | levant decommissioning data, including:    |
| Knocker off and Alva. Loaded casing with |                  |                    | ed, interval grouted, casing left in hole, |
| grout. Pulled Calsing, Grav              |                  | well stickup, etc. |                                            |
|                                          | 75 A ,           |                    |                                            |

beslegic North Star Drilling Contractor

| WELL DECOMMISSIONING RECORD                      | •                                                            |
|--------------------------------------------------|--------------------------------------------------------------|
| Site Name: Seveca Army Depot                     | Well ID: MW/3-/0                                             |
| Site Location: 5EAD 13                           | Driller: 500 H Broad 5                                       |
| Drilling Company: Gratogic North Star            | Inspector:                                                   |
| Drining Company. (546/03) to the received        | Date:                                                        |
| DECOMMISSIONING DATA                             | WELL SCHEMATIC*                                              |
| (Fill in all that apply)                         | Depth ,                                                      |
| (1 in an that appry)                             | (feet) /8 -   /6, 2                                          |
| OVERDRILLING                                     | O Sticken TOC TO TO                                          |
| Interval Drilled                                 | 4-361                                                        |
| Drilling Method(s)                               |                                                              |
| Borehole Dia. (in.)                              |                                                              |
| Temporary Casing Installed? (y/n)                |                                                              |
| Depth temporary casing installed                 | Grant                                                        |
| Casing type/dia. (in.)                           | -                                                            |
| Method of installing                             | $ \frac{1}{2}$                                               |
| CARING DITLING                                   | puller                                                       |
| CASING PULLING Method employed Growthal broat    |                                                              |
| Casing retrieved (feet)                          | - 800                                                        |
| Casing type/dia. (in.)                           | - Well                                                       |
| Cusing type dua. (iii)                           |                                                              |
| CASE PERFORATING                                 |                                                              |
| Equipment used                                   | 15 Bottom                                                    |
| Number of perforations/foot                      |                                                              |
| Size of perforations                             |                                                              |
| Interval perforated                              |                                                              |
| CROUTING                                         |                                                              |
| GROUTING Interval grouted (FBLS)                 | Not                                                          |
| # of batches prepared                            |                                                              |
| For each batch record:                           | Dr. New                                                      |
| Quantity of water used (gal.)                    |                                                              |
| Quantity of cement used (lbs.) 2 bam 5           |                                                              |
| Cement type                                      |                                                              |
| Quantity of bentonite used (lbs.)                |                                                              |
| Quantity of calcium chloride used (lbs.)         |                                                              |
| Volume of grout prepared (gal.)                  |                                                              |
| Volume of grout used (gal.)                      |                                                              |
| COMMENTS: Depth to water - 6 & ft from TOC       | * Sketch in all relevant decommissioning data, including:    |
| Knocked end can effo well caring came with rods. | interval overdrilled, interval grouted, casing left in hole, |
| Trenil granted hole. Addy soil on too            | well stickup, etc.                                           |
|                                                  |                                                              |

8Hites

Drilling Contractor

| WELL DECOMMISSIONING                                        | RECORD                                  |                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|                                                             |                                         |                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Name: Seneca Army Dep                                  | pat                                     | Well ID: /         | MW13-11                                                 | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Site Location: SEAD 13                                      |                                         | Driller: 5         | cott Bree.                                              | 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Drilling Company: Geologic Nor                              | th star                                 | Inspector:         | Scott Dillma                                            | . ^                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                             |                                         | Date: 9/           | 15/10                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DECOMMISSIONING                                             | DATA                                    |                    | WELL SCHEMAT                                            | TC*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| (Fill in all that app                                       |                                         | Depth              |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| (= === === === == = = = = = = = = = = =                     | **                                      | (feet)             | Sticke<br>1.8 f                                         | P 16.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| OVERDRILLING                                                |                                         | 0                  | - 1.8 f                                                 | red TOGTO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Interval Drilled                                            |                                         |                    |                                                         | 15011                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Drilling Method(s)                                          |                                         |                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Borehole Dia. (in.)                                         |                                         |                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Temporary Casing Installed? (y/n)                           |                                         | -                  |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Depth temporary casing installed                            |                                         |                    | 0.36                                                    | Grout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Casing type/dia. (in.)                                      |                                         |                    | Pre                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Method of installing                                        |                                         |                    | vell                                                    | 71 71                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| CASING BUILLING                                             |                                         | 10                 | Colled                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CASING PULLING Method employed                              | Grout Pull Grout                        | 10                 |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1                                                           |                                         |                    | Total Indiana                                           | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |
| Casing retrieved (feet) Casing type/dia. (in.)              | 16.6 ft<br>2" NC                        |                    |                                                         | THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE S |
| Casing type/dia. (iii.)                                     | LLNC                                    |                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CASE PERFORATING                                            |                                         | 1                  |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Equipment used                                              |                                         | 15                 |                                                         | 1/0-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Number of perforations/foot                                 |                                         |                    |                                                         | Botton                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Size of perforations                                        |                                         |                    |                                                         | Well                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Interval perforated                                         |                                         |                    |                                                         | Y A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| GROUTING                                                    |                                         |                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Interval grouted (FBLS)                                     | 1-14.8                                  |                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| # of batches prepared                                       |                                         |                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| For each batch record:                                      |                                         |                    | -                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of water used (gal.)                               | 18                                      |                    |                                                         | NOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Quantity of cement used (lbs.)                              | 26695                                   |                    |                                                         | DRILLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Cement type                                                 | Type JI                                 |                    |                                                         | Danser                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Quantity of bentonite used (lbs.)                           | 10 gounds                               |                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of calcium chloride used (lbs.)                    |                                         |                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Volume of grout prepared (gal.) Volume of grout used (gal.) | 15                                      |                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| COMMENTS: Death to water = 5.1                              | 1ft from TOC                            | * Charab in all    | lovent decomposite in the                               | late including                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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|                                                                            | aining borehole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | well stickup, etc.                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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                                                                                                                                                                                                                                                                    |
| Added soil in top.                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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Geologic North Star

Drilling Contractor

| WELL DECOMMISSIONING R                                             | ECORD                                             |                    |                                                     | •             |
|--------------------------------------------------------------------|---------------------------------------------------|--------------------|-----------------------------------------------------|---------------|
| Site Name: Seneca Army De                                          | aot .                                             | Well ID:           | MW 24-                                              | 1             |
| Site Location: SEAD - 24                                           | 7                                                 | Driller: J         | or men                                              | ze/           |
| Drilling Company: G-Cologic North                                  | Star                                              |                    | Scott Dill                                          |               |
| , , , , , , , , , , , , , , , , , , , ,                            |                                                   | Date: 9            | 2 4                                                 | 77007         |
| DECOMMISSIONING I                                                  | DATA                                              |                    | WELL SCHEM                                          | ATIC*         |
| (Fill in all that apply                                            |                                                   | Depth              |                                                     | 5 12,1        |
|                                                                    |                                                   | (feet)             |                                                     | , , , ,       |
| OVERDRILLING                                                       |                                                   | 0                  | stig<br>Rum                                         | Ken TOP TO TO |
| Interval Drilled                                                   | WASHINGTON AND AND AND AND AND AND AND AND AND AN |                    |                                                     | Soil          |
| Drilling Method(s)                                                 |                                                   |                    |                                                     |               |
| Borehole Dia. (in.)                                                |                                                   |                    |                                                     |               |
| Temporary Casing Installed? (y/n) Depth temporary casing installed |                                                   | 5                  |                                                     |               |
| Casing type/dia. (in.)                                             |                                                   |                    |                                                     |               |
| Method of installing                                               |                                                   |                    | - PUC                                               | Grout         |
| mount of maching                                                   |                                                   |                    | PULL<br>PUC<br>WEL                                  | 1             |
| CASING PULLING                                                     |                                                   |                    |                                                     |               |
| Method employed                                                    | Grout Pull, Growt                                 | 10                 |                                                     | Botton        |
| Casing retrieved (feet)                                            | 12:1 FT                                           |                    |                                                     | Postar        |
| Casing type/dia. (in.)                                             | 2"PVC                                             |                    | -                                                   | / Well        |
|                                                                    |                                                   |                    |                                                     | well          |
| CASE PERFORATING                                                   |                                                   | 15                 | **********                                          |               |
| Equipment used                                                     |                                                   | 15                 | Militari Annagana                                   |               |
| Number of perforations/foot                                        |                                                   |                    |                                                     |               |
| Size of perforations Interval perforated                           |                                                   |                    |                                                     |               |
| interval perforated                                                |                                                   |                    |                                                     | 1             |
| GROUTING                                                           |                                                   | 20                 |                                                     |               |
| Interval grouted (FBLS)                                            | 1-9.6 /                                           |                    |                                                     |               |
| # of batches prepared                                              |                                                   |                    |                                                     |               |
| For each batch record:                                             |                                                   |                    | ***************************************             | ,             |
| Quantity of water used (gal.)                                      | 18                                                |                    | aget till agstadensame                              |               |
| Quantity of cement used (lbs.)                                     | 26095                                             | 25                 |                                                     | l' }          |
| Cement type                                                        | Type Y Portland                                   |                    |                                                     |               |
| Quantity of bentonite used (lbs.)                                  | 16 pounds                                         |                    |                                                     | NOT           |
| Quantity of calcium chloride used (lbs.)                           |                                                   |                    |                                                     | DRILLED       |
| Volume of grout prepared (gal.) Volume of grout used (gal.)        | 9001                                              | 30                 |                                                     |               |
| Yourne or grout used (gail)                                        | 1 9gal                                            |                    |                                                     |               |
| COMMENTS: Depth to water =                                         | 5,52-ft from TOC                                  | * Charth !"        | -1                                                  |               |
| Knocked out end cap. Loaded o                                      |                                                   |                    | elevant decommissionii<br>led, interval grouted, ca |               |
| Pulled casing. Growted remo                                        |                                                   | well stickup, etc. | •                                                   | IOM AII HOID, |
| Added soil in top.                                                 |                                                   |                    |                                                     |               |

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING RECORD                                               |                                                              |
|---------------------------------------------------------------------------|--------------------------------------------------------------|
| Site Name: Seneca Army Depot                                              | Well ID: MW 24-2                                             |
| Site Location: SEAD Z4                                                    | Driller: Joe Menzel                                          |
| Drilling Company: Geologic North Star                                     | Inspector: Scott Dillman                                     |
| J. S. S. S. S. S. S. S. S. S. S. S. S. S.                                 | Date: 9/22/10                                                |
| DECOMMISSIONING DATA                                                      | WELL SCHEMATIC*                                              |
| (Fill in all that apply)                                                  | Depth 2 1/8 4                                                |
| (2 III III III III III III III                                            | (feet)                                                       |
| OVERDRILLING                                                              | O SHOKUP TOP TO TO                                           |
| Interval Drilled                                                          | 50:19                                                        |
| Drilling Method(s)                                                        | convete                                                      |
| Borehole Dia. (in.)                                                       |                                                              |
| Temporary Casing Installed? (y/n)                                         |                                                              |
| Depth temporary casing installed                                          | 5 DULLED !                                                   |
| Casing type/dia. (in.)                                                    | PUC 7 Growt                                                  |
| Method of installing                                                      | 5 PULLED Growt                                               |
| CASING PULLING                                                            |                                                              |
| Method employed Front, Poll Grant                                         |                                                              |
| Casing retrieved (feet)                                                   |                                                              |
| Casing type/dia. (in.)                                                    |                                                              |
|                                                                           |                                                              |
| CASE PERFORATING                                                          |                                                              |
| Equipment used                                                            | 15                                                           |
| Number of perforations/foot                                               |                                                              |
| Size of perforations                                                      | BoTTone                                                      |
| Interval perforated                                                       | I of                                                         |
|                                                                           | 20 - / Well                                                  |
| GROUTING                                                                  |                                                              |
| Interval grouted (FBLS)                                                   |                                                              |
| # of batches prepared                                                     |                                                              |
| For each batch record:                                                    |                                                              |
| Quantity of water used (gal.)  Quantity of cement used (lbs.)             | 25 - /                                                       |
|                                                                           |                                                              |
| Cement type  Type I fortlend                                              |                                                              |
| Quantity of bentonite used (lbs.)                                         | / Not                                                        |
| Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.) | DRILLED                                                      |
| Volume of grout used (gol )                                               | 30 - 1/                                                      |
| volume of grout used (gai.)                                               |                                                              |
| COMMENTS: Depth to water = 8.25 ft from TOC                               | * Sketch in all relevant decommissioning data, including:    |
| Knocked out end cap. Loaded casing with grout.                            | interval overdrilled, interval grouted, casing left in hole, |
| Pulled casing. Granted remaining borehole.                                | well stickup, etc.                                           |
| Added soil on top.                                                        |                                                              |

Geologic North Star

#### WELL DECOMMISSIONING RECORD Well ID: Seneca Site Name: Driller: Site Location: SEA D Inspector: Scott Drilling Company: Geologic Date: 10 **DECOMMISSIONING DATA** WELL SCHEMATIC\* Depth (Fill in all that apply) (feet) stick of OVERDRILLING Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) PUC Method of installing WELL CASING PULLING 10 Method employed Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING 15 Equipment used BoTTUN Number of perforations/foot of Size of perforations Well Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type NOT Quantity of bentonite used (lbs.) Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) 30 Volume of grout used (gal.) Death to water \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

Drilling Contractor

MW25-4D

| WELL DECOMMISSIONING R                                        | ECORD         | •                  | 1.0.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |
|---------------------------------------------------------------|---------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| WELL DECOMMISSIONING K                                        | ECOND         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |
| Site Name: SEAD -25                                           |               | Well ID:           | MW25-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |
| Site Location: He Trainty aren-                               |               | Driller:           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Drilling Company:                                             |               | Inspector:         | MCAINTO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Diffing Company.                                              |               | Date:              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| DECOMMISSIONING D                                             | NATA          |                    | WELL SCHEMAT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ïC*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |
| (Fill in all that apply)                                      |               | Depth              | WELL SCILIVIAT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -501                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2. |
| (I'm m an that appry                                          | ,             | (feet)             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |    |
| <u>OVERDRILLING</u>                                           |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |
| Interval Drilled                                              |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Drilling Method(s)                                            |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | M. \                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |
| Borehole Dia. (in.)                                           |               | _                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Temporary Casing Installed? (y/n)                             |               | 5                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Depth temporary casing installed                              |               |                    | 100000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Casing type/dia. (in.)                                        |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Method of installing                                          |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| CASING PULLING                                                |               | 10                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Method employed                                               |               | 10                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Casing retrieved (feet)                                       |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | IXI I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |
| Casing type/dia. (in.)                                        |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ( )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |
| Casing type dia. (iii.)                                       |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| CASE PERFORATING                                              |               | 15                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | N >2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3  |
| Equipment used                                                |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Number of perforations/foot                                   |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |
| Size of perforations                                          |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>V</b>   V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    |
| Interval perforated                                           |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | $M \setminus I$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
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| GROUTING                                                      |               |                    | Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Compan |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Interval grouted (FBLS)                                       | 23./          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |
| # of batches prepared                                         |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | X  /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |
| For each batch record: Quantity of water used (gal.)          | 1900/         | 7=                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Quantity of water used (gar.)  Quantity of cement used (lbs.) | Mo-1hc        | 25                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Cement type                                                   | Deserted #1   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |
| Quantity of bentonite used (lbs.)                             | 10165         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 25.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |
| Quantity of calcium chloride used (lbs.)                      | (00)          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Volume of grout prepared (gal.)                               |               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| Volume of grout used (gal.)                                   | 29 gullor     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
|                                                               |               |                    | source/utter/of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | lannar de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la c |    |
| COMMENTS:                                                     |               |                    | elevant decommissioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | data, including:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |    |
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Drilling Contractor

Department Representative

Gout in place.

7D: 25.3 Gal 23.1

mw25-4D

| Site Name: SEAD-25                           | Well ID:        | MW25-7D                                  |
|----------------------------------------------|-----------------|------------------------------------------|
| Site Location: Fre trainy are                | Driller:        |                                          |
| Drilling Company:                            | Inspector:      | menante                                  |
|                                              | Date:           |                                          |
| DECOMMISSIONING DATA                         |                 | WELL SCHEMATIC*                          |
| (Fill in all that apply)                     | Depth           | -50:1                                    |
|                                              | (feet)          |                                          |
| OVERDRILLING                                 |                 | X                                        |
| Interval Drilled                             |                 |                                          |
| Drilling Method(s)                           |                 |                                          |
| Borehole Dia. (in.)                          |                 |                                          |
| Temporary Casing Installed? (y/n)            | 5               |                                          |
| Depth temporary casing installed             |                 |                                          |
| Casing type/dia. (in.)                       |                 |                                          |
| Method of installing                         |                 |                                          |
| CASING PULLING                               | 14              |                                          |
| Method employed                              |                 |                                          |
| Casing retrieved (feet)                      |                 |                                          |
| Casing type/dia. (in.)                       |                 | <b>=</b> / \ 28                          |
|                                              |                 | 1 \ 60                                   |
| CASE PERFORATING                             | 15              |                                          |
| Equipment used                               |                 |                                          |
| Number of perforations/foot                  |                 |                                          |
| Size of perforations                         |                 |                                          |
| Interval perforated                          |                 |                                          |
| GROUTING                                     | 20              | $-$ M $\setminus$                        |
| Interval grouted (FBLS)                      |                 |                                          |
| # of batches prepared                        |                 |                                          |
| For each batch record:                       |                 |                                          |
| Quantity of water used (gal.)                | 4               |                                          |
| Quantity of cement used (lbs.)               | 25              |                                          |
| Cement type Powled                           | 41              | <b>—</b>                                 |
| Quantity of bentonite used (lbs.) /olbs      |                 |                                          |
| Quantity of calcium chloride used (lbs.)     |                 |                                          |
| Volume of grout prepared (gal.)              | 20              |                                          |
| Volume of grout used (gal.) 30 30            | WW DC           | 30.2                                     |
| V                                            |                 | 2012                                     |
| COMMENTS:  Remove Balanck , Themany Goat , R | * Sketch in all | relevant decommissioning data, including |

Drilling Contractor

Department Representative

Grat In place

| ite Name: SEAD 25  ite Name: SEAD 25  ite Location: Fre total Ase.  Driller:  ite Location: Fre total Ase.  Drilling Company: Geolgs to NS  DECOMMISSIONING DATA  (Fill in all that apply)  DECOMMISSIONING DATA  (Fill in all that apply)  DECOMMISSIONING DATA  (Fill in all that apply)  DECOMMISSIONING DATA  (Fill in all that apply)  Depth  (feet)  DECOMMISSIONING DATA  (Fill in all that apply)  Depth  (feet)  DECOMMISSIONING DATA  (Fill in all that apply)  Depth  (feet)  DECOMMISSIONING DATA  (Fill in all that apply)  Depth  (feet)  DECOMMISSIONING DATA  (Fill in all that apply)  Depth  (feet)  DECOMMISSIONING DATA  (Fill in all that apply)  Depth  (feet)  DECOMMISSIONING DATA  (Fill in all that apply)  Depth  Casing represent used  Casing typedia. (in.)  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| ite Location: Fee Turket Me.  DECOMMISSIONING DATA (Fill in all that apply)  DECOMMISSIONING DATA (Fill in all that apply)  DECOMMISSIONING DATA (Fill in all that apply)  Depth (feet)  Depth (feet)  Depth (feet)  Depth (feet)  So !- Ste  Temporary Casing Installed?  Casing type/dia. (in.)  Depth temporary casing installed  Casing type/dia. (in.)  CASE PERFORATING  Equipment used  Number of perforations Interval perforated  GROUTING Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared (Quantity of water used (gal.) Quantity of catclum chloride used (lbs.)  Cement type Quantity of catclum chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout prepared (gal.) Volume of grout used (gal.)  Volume of grout used (gal.)  FOMMENTS:  Section all relevant decommissioning data, including: inerval overstrilled, interval grouted, caving left in hole, well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| DECOMMISSIONING DATA (Fill in all that apply)  DEPTH (Feet)  WELL SCHEMATIC*  Depth (feet)  WELL SCHEMATIC*  Depth (feet)  WELL SCHEMATIC*  Depth (feet)  Depth (feet)  WELL SCHEMATIC*  Depth (feet)  Depth (feet)  WELL SCHEMATIC*  Depth (feet)  So I-Sit  Femporary Casing Installed?  Casing Installed?  Casing stype/dia. (in.)  Depth temporary casing installed  Casing stype/dia. (in.)  CASING PULLING  Method of installing  CASING PULLING  Method of installing  CASING PULLING  Method of profroid  Casing retrieved (feet)  T-Sit  Casing type/dia. (in.)  CASE PERFORATING  Equipment used  Number of perforations Interval profrated  GROUTING Interval perforated  GROUTING  Interval grouted (FBLS)  # of batches prepared  For each batch record:  Quantity of calcium chloride used (lbs.)  Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  Volume of grout used (gal.)  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| interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing  CASING PULLING Method employed Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gls.) Quantity of bentonite used (lbs.) Quantity of chement used (lbs.) Quantity of chement used (lbs.) Quantity of chement used (gls.) Volume of grout used (gl.) Volume of grout used (gl.) Volume of grout used (gl.) Volume of grout used (gl.) Volume of grout used (gl.) Volume of grout used (gl.)  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| nterval Drilled Prilling Method(s) Sorehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing  CASING PULLING Method omployed Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of cement used (lbs.) Quantity of cement used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout used (gal.) Quantity of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.) Volume of grout used (gal.)  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| Drilling Method(s) Borehold Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing Method employed Casing retrieved (feet) Casing type/dia. (in.)  CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated  GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of ement used (lbs.) Quantity of calcium chloride used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout used (gal.)  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(iii)                   |                                                 | /             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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                                               | TOP OH QUOUT DOUGHA                      |                                                 |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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Drilling Contractor

Costy polled

Department Representative

TD: 7.3 Gal = 5.5 next to 120

| Selleca Ai                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | my bepot Activity | MW25-12                           | 2 D              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------|------------------|
| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | )                 | INW 73 14                         |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                   |                  |
| Site Name: SEAD · 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Well ID:          | MW-12D                            |                  |
| Site Location: Fire Trainy Aven                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Driller:          |                                   |                  |
| Drilling Company: Gedoric                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Inspector:        | malist                            |                  |
| Drining company.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Date:             |                                   |                  |
| DECOMMISSIONING DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   | WELL SCHEMATI                     | C*               |
| (Fill in all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Depth             |                                   | 1 1501.8         |
| (1.3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (feet)            |                                   | 30 1.0           |
| <u>OVERDRILLING</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                                   |                  |
| Interval Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                                   |                  |
| Drilling Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                   | M· 1             |
| Borehole Dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                                   |                  |
| Temporary Casing Installed? (y/n)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                                   | l' I I           |
| Depth temporary casing installed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                                   |                  |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                                   |                  |
| Method of installing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                                   |                  |
| CASING PULLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |                                   |                  |
| Method employed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | COUNTY (STORES)                   |                  |
| Casing retrieved (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                   |                                   |                  |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                                   |                  |
| CASE PERFORATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                                   | / >23.3          |
| Equipment used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |                                   |                  |
| Number of perforations/foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                                   |                  |
| Size of perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                                   |                  |
| Interval perforated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   | -                                 |                  |
| GROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20                |                                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .3                |                                   |                  |
| # of batches prepared                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                                   |                  |
| For each batch record:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                                   | V 1 I I          |
| Quantity of water used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                   |                                   |                  |
| Quantity of cement used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |                                   | 1-2-             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | land 141          |                                   | 45.1             |
| Territoria de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la comp | 3                 |                                   |                  |
| Quantity of calcium chloride used (lbs.)  Volume of grout prepared (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                                   |                  |
| Volume of grout used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | gallos            |                                   |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                   |                  |
| COMMENTS:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   | all relevant decommissioning of   |                  |
| Remove Bollows, perfugie and cup                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 100000            | rdrilled, interval grouted, casin | ig left in hole, |
| gract. Remore protective cora & C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | well stickup      | , τι.                             |                  |

Drilling Contractor

Department Representative

Groot in place

TD: 25.1 God 23.3 MW 25-12D

MU125-14D

| WELL DECOMMISSIONING RECOR                                  | D          |                   |                                                       |                   |
|-------------------------------------------------------------|------------|-------------------|-------------------------------------------------------|-------------------|
| Site Name: SEAD 25                                          |            | Well ID:          | MW 25-1                                               | 40                |
| Site Location: Fie trainff wer                              |            | Driller:          | ,                                                     |                   |
| Drilling Company: Geologie NS                               |            | Inspector:        | mcalles,                                              |                   |
| Drining company.                                            |            | Date:             |                                                       |                   |
| DEGOLD MIGGIONING DATA                                      |            | Date.             | WELL SCHEMA                                           | TIC*              |
| DECOMMISSIONING DATA (Fill in all that apply)               |            | Depth             | WELL SCHEMA                                           | 244               |
| (Fill ill all that apply)                                   |            | (feet)            |                                                       | 1 41              |
| OVERDRILLING                                                |            | (1001)            |                                                       | IXI I             |
| Interval Drilled                                            |            |                   |                                                       |                   |
| Drilling Method(s)                                          |            |                   |                                                       |                   |
| Borehole Dia. (in.)                                         |            |                   |                                                       | X                 |
| Temporary Casing Installed? (y/n)                           |            | 5                 |                                                       |                   |
| Depth temporary casing installed                            |            | ے                 |                                                       |                   |
| Casing type/dia. (in.)                                      |            |                   |                                                       | X  /              |
| Method of installing                                        |            |                   |                                                       |                   |
|                                                             |            |                   |                                                       |                   |
| CASING PULLING                                              |            | 10                |                                                       |                   |
| Method employed                                             |            | (0                |                                                       | X  /              |
| Casing retrieved (feet)                                     |            |                   |                                                       |                   |
| Casing type/dia. (in.)                                      |            |                   |                                                       |                   |
|                                                             |            |                   |                                                       |                   |
| CASE PERFORATING                                            |            | 15                |                                                       |                   |
| Equipment used                                              |            |                   |                                                       | > 22 /            |
| Number of perforations/foot                                 |            |                   |                                                       |                   |
| Size of perforations                                        |            |                   |                                                       |                   |
| Interval perforated                                         |            |                   |                                                       | MI                |
|                                                             |            | 20                |                                                       |                   |
| GROUTING                                                    |            |                   | -                                                     |                   |
| Interval grouted (FBLS)                                     | 2.5        |                   |                                                       |                   |
| # of batches prepared                                       |            |                   |                                                       | $\times$          |
| For each batch record:                                      |            |                   |                                                       | 44/1              |
| Quantity of water used (gal.)                               | 90/        | 25                |                                                       | 24.8              |
| Quantity of cement used (lbs.)                              | 105        |                   |                                                       | 01-               |
| Cement type                                                 | UK #1      |                   |                                                       |                   |
|                                                             | ale 10 las |                   |                                                       |                   |
| Quantity of calcium chloride used (lbs.)                    |            |                   |                                                       |                   |
| Volume of grout prepared (gal.) Volume of grout used (gal.) | Caultan    |                   | -                                                     |                   |
| volume of grout used (gail)                                 | Squilar    | Management        | talification mesons                                   |                   |
| COMMENTS:                                                   |            | * Chatab in all   | relevant description                                  | a data including: |
| Renow Bollows, Tremme Grout                                 | Renove     |                   | relevant decommissionin<br>lled, interval grouted, ca |                   |
| Disterve Casin, 700 off short,                              | Boekhul    | well stickup, etc |                                                       |                   |
| CUT COSM TO -SPT BOS                                        | Do contrad |                   |                                                       |                   |

Drilling Contractor

Department Representative

Grout in place

TD: 24.6 Gad: 22.8 Mw 25-14D

| Well ID: MW 25-16D        |
|---------------------------|
|                           |
| Driller:                  |
| Inspector:                |
| Date:                     |
| WELL SCHEMATIC*           |
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| Depth (feet)              |
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Drilling Contractor

Department Representative

25-WW25-16D

#### WELL DECOMMISSIONING RECORD 26-Well ID: Site Name: Seneca Driller: Site Location: SEA D Inspector: Drilling Company: Date: WELL SCHEMATIC\* **DECOMMISSIONING DATA** (Fill in all that apply) Depth (feet) stick up Removed OVERDRILLING Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Grout Casing type/dia. (in.) PVC Method of installing WELL CASING PULLING 10 Method employed Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING 15 Equipment used Number of perforations/foot Size of perforations Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLEL Volume of grout prepared (gal.) 30 Volume of grout used (gal.) COMMENTS: Depth to water ft from TOC \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

#### WELL DECOMMISSIONING RECORD Seneca Well ID: Site Name: SEA D Driller: Menze Site Location: Drilling Company: North Inspector: Geologic Date: **DECOMMISSIONING DATA** WELL SCHEMATIC\* (Fill in all that apply) Depth 2.4 ft (feet) TOP TO TA stick up **OVERDRILLING** Interval Drilled Soil Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) PUC Method of installing WELL CASING PULLING 10 Method employed Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING Betton 15 Equipment used of Number of perforations/foot Wel/ Size of perforations Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) Volume of grout used (gal.) 30 \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

| WELL DECOMMISSIONING<br>                 | RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                     |                                            |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------|
| Site Name: Seneca Army A                 | leant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Well ID:            | MW 26-3                                    |
| Site Location: SEAD 26                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Driller:            | De Menzel                                  |
| Drilling Company: G-Cologic Nort         | h Star                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                     | Scott Dillman                              |
|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Date: 9             |                                            |
| DECOMMISSIONIN                           | G DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                     | WELL SCHEMATIC*                            |
| (Fill in all that ap                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Depth               | WELL SCHEWATIC                             |
| (                                        | 137                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (feet)              | 2,5#                                       |
| OVERDRILLING                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | .0                  | Stick up Top TO TD                         |
| Interval Drilled                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | 4 Soil                                     |
| Drilling Method(s)                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                            |
| Borehole Dia. (in.)                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                            |
| Temporary Casing Installed? (y/n)        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | _                   |                                            |
| Depth temporary casing installed         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | _5_                 | PULLED                                     |
| Casing type/dia. (in.)                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | PUC - Grout                                |
| Method of installing                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | PULLED Growt                               |
| CASING PULLING                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                            |
| Method employed                          | Grout, Poll, Grait                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10                  |                                            |
| Casing retrieved (feet)                  | STOWN, TOTAL OF OUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     | - (                                        |
| Casing type/dia. (in.)                   | Z"PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     | *                                          |
| S S F L L L L L L L L L L L L L L L L L  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | Bettom                                     |
| CASE PERFORATING                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                            |
| Equipment used                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15                  |                                            |
| Number of perforations/foot              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | - / well                                   |
| Size of perforations                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | <b>—</b>  /                                |
| Interval perforated                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                            |
| GROUTING                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20                  |                                            |
| Interval grouted (FBLS)                  | 1 161                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -                   | _ / /                                      |
| # of batches prepared                    | 1-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                     |                                            |
| For each batch record:                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | <b>→</b>   /                               |
| Quantity of water used (gal.)            | 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     | / / /                                      |
| Quantity of cement used (lbs.)           | 2-6ag5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 25                  | -                                          |
| Cement type                              | Type Y Portland                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | <del> </del>  /                            |
| Quantity of bentonite used (lbs.)        | 10 pounds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     | Not                                        |
| Quantity of calcium chloride used (lbs.) | THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE S |                     |                                            |
| Volume of grout prepared (gal.)          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | DRILLED                                    |
| Volume of grout used (gal.)              | 14 pal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 30                  |                                            |
|                                          | J.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |                                            |
| COMMENTS: Depth to water:                | = 12,90 ft from TOC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | * Sketch in all re  | levant decommissioning data, including:    |
| Knocked out end cap. Loaded              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | interval overdrille | ed, interval grouted, casing left in hole, |
| Pulled casing. Growted re                | maining borehole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | well stickup, etc.  |                                            |
| Added soil in tope                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                            |

Geologic North Star

| WELL DECOMMISSIONING R.                                      | ECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SAMPLE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF T |                         | ,                |           |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------|-----------|
| Site Name: Seneca Army De                                    | ant-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Well ID:                                                                                                                                                                                                                     | MW 26 -                 | -4               |           |
| Site Location: SEAD 26                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Driller:                                                                                                                                                                                                                     | CF : - 1                | vane             | 0 2       |
| Drilling Company: G-Eologic North                            | Star                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                              | Scott Dil               |                  |           |
|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Date: 9                                                                                                                                                                                                                      | 2 - 1                   | rracr [          |           |
| DECOMMISSIONING D                                            | PATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                              | WELL SCHEM              | IATIC*           |           |
| (Fill in all that apply                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Depth                                                                                                                                                                                                                        |                         | 7 A              | 13ft      |
|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (feet)                                                                                                                                                                                                                       | • •                     | -                |           |
| OVERDRILLING                                                 | processor and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon | -0                                                                                                                                                                                                                           | <u> </u>                | ak up            | TOP TO TA |
| Interval Drilled                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |                         | 1                | Soil      |
| Drilling Method(s)                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |                         |                  |           |
| Borehole Dia. (in.) Temporary Casing Installed? (y/n)        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | ****                    | //               |           |
| Depth temporary casing installed                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5                                                                                                                                                                                                                            |                         | CAL              |           |
| Casing type/dia. (in.)                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              | PULL PULL               | ELS.             | Growt     |
| Method of installing                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |                         |                  | Grow.     |
|                                                              | And and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state  |                                                                                                                                                                                                                              | WE                      | 4                |           |
| CASING PULLING                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |                         |                  |           |
| Method employed                                              | Grout, Pull, Grost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | _/0                                                                                                                                                                                                                          |                         |                  |           |
| Casing retrieved (feet)                                      | 13 Ft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                              |                         |                  |           |
| Casing type/dia. (in.)                                       | 2"PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                              |                         |                  | Pottery   |
| CASE PERFORATING                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |                         | 1 /              | 1 0+      |
| Equipment used                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15                                                                                                                                                                                                                           |                         |                  | well      |
| Number of perforations/foot                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |                         | - V              |           |
| Size of perforations                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |                         |                  | /         |
| Interval perforated                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |                         |                  |           |
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| GROUTING                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20                                                                                                                                                                                                                           |                         |                  |           |
| Interval grouted (FBLS)                                      | 1-110+                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                              |                         |                  |           |
| # of batches prepared                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                              |                         |                  |           |
| For each batch record: Quantity of water used (gal.)         | 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                              |                         | ľ                |           |
| Quantity of water used (gar.) Quantity of cement used (lbs.) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 25                                                                                                                                                                                                                           |                         |                  |           |
| Cement type                                                  | Zbays<br>Type I Portland                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                              |                         |                  |           |
| Quantity of bentonite used (lbs.)                            | 10 pounds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                              |                         |                  | NOT       |
| Quantity of calcium chloride used (lbs.)                     | 115 posicas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                              |                         |                  | 1 .1      |
| Volume of grout prepared (gal.)                              | ^                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                              |                         |                  | DRILLED   |
| Volume of grout used (gal.)                                  | 11 ac-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 30                                                                                                                                                                                                                           |                         |                  |           |
| COM O COM TO A                                               | 7 )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                              |                         | <del></del>      |           |
| COMMENTS: Depth to water =                                   | 9.5 ft from TOC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | * Sketch in all re                                                                                                                                                                                                           | levant decommissioni    | ng data, inclu   | ling:     |
|                                                              | sing with grout.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | interval overdrill                                                                                                                                                                                                           | ed, interval grouted, c | asing left in ho | ole,      |
| Pulled casing. Growted rema<br>Added soil on top.            | ining borehole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | well stickup, etc.                                                                                                                                                                                                           |                         |                  |           |
| TOWNER JUIL ON LOBO                                          | i                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                              |                         |                  | 1         |

Geologic North Star

#### WELL DECOMMISSIONING RECORD Seneca Site Name: Well ID: SEA D Site Location: Driller: Menzo. Drilling Company: Geologic Scott Dillman Inspector: Date: 123/10 DECOMMISSIONING DATA WELL SCHEMATIC\* (Fill in all that apply) Depth (feet) OVERDRILLING TOP TO TO Interval Drilled Soil Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (v/n) Depth temporary casing installed Casing type/dia. (in.) Grout PUC Method of installing WELL CASING PULLING Method employed 10 Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING Equipment used 15 Number of perforations/foot Buttan Size of perforations Interval perforated Well 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) Volume of grout used (gal.) 30 COMMENTS: Depth to water ft from TOC \* Sketch in all relevant decommissioning data, including: out end cap. Loade. interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

**Drilling Contractor** 

#### WELL DECOMMISSIONING RECORD Seneca Site Name: Well ID: Site Location: SEA Driller: Drilling Company: Dillman Inspector: Date: 10 DECOMMISSIONING DATA WELL SCHEMATIC\* (Fill in all that apply) Depth 1.8 F (feet) OVERDRILLING Interval Drilled Soil Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed PULLED Grout Casing type/dia. (in.) PUC Method of installing WELL **CASING PULLING** 10 Method employed Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING 15 Equipment used Number of perforations/foot BoTTany Size of perforations of Interval perforated Well 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLEL Volume of grout prepared (gal.) Volume of grout used (gal.) 30 \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

| WELL DECOMMISSIONING                      | RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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| Site Name: Seneca Army Depot              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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Geologic North Star
Drilling Contractor

| WELL DECOMMISSIONING F                                      | RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |  |
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| Method employed                                             | Grout, Pull, Growt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |  |
| Casing retrieved (feet)                                     | 13.5 Pt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |  |
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| CASE PERFORATING                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | Bath                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | jan            |  |
| Equipment used                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15                  | of.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |  |
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| GROUTING                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |  |
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| Cement type                                                 | Type I Portland                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |  |
| Quantity of bentonite used (lbs.)                           | 10 pounds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     | Not                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |  |
| Quantity of calcium chloride used (lbs.)                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | DRILL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ED             |  |
| Volume of grout prepared (gal.) Volume of grout used (gal.) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 30                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |  |
| volune of grout used (gal.)                                 | 12 gal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | _30_                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |  |
| COMMENTS: Depth to water =                                  | 10 0 CLC ===                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |  |
| Knocked out end cap. Loaded casing with grout.              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | * Sketch in all rel | levant decommissioning data, including:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |  |
| Piled casing. Grated remaining borehole.                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | well stickup, etc.  | ed, interval grouted, casing left in hole,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                |  |
| Added soil on top.                                          | - JENGIE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |  |
|                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1              |  |

Geologic North Star
Drilling Contractor

#### WELL DECOMMISSIONING RECORD Site Name: Seneca Well ID: MW 26-12 Driller: Steve Larance Site Location: SEA D Drilling Company: Geologic Inspector: Scott Dillman Date: **DECOMMISSIONING DATA** WELL SCHEMATIC\* (Fill in all that apply) Depth (feet) stick of TOP TO TA OVERDRILLING Interval Drilled Soil Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) PULLED Depth temporary casing installed Growt Casing type/dia. (in.) PUC Method of installing WELL CASING PULLING Method employed 10 Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING 15 Equipment used well Number of perforations/foot Size of perforations Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) bags Cement type Type Y Purtle Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) Volume of grout used (gal.) 30 COMMENTS: Depth to water = ft from TOC \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

| WELL DECOMMISSIONING                                 | RECORD             |                    | •                                          |  |  |  |
|------------------------------------------------------|--------------------|--------------------|--------------------------------------------|--|--|--|
| Site Name: Seneca Army Depot                         |                    | Well ID: MW 26-11  |                                            |  |  |  |
| Site Location: SEAD ZG                               |                    | Driller:           |                                            |  |  |  |
| Drilling Company: G-eologic North Star               |                    |                    |                                            |  |  |  |
| 3000                                                 | 5101               | Date:              | Inspector: Scott Dillman                   |  |  |  |
| DECOMMISSIONING                                      | CDATA              | Date.              | 7/23/10                                    |  |  |  |
| (Fill in all that ap                                 |                    | Donal              | WELL SCHEMATIC*                            |  |  |  |
| (1 m m an mat ap                                     | bià)               | Depth              | 1.34, 16.46                                |  |  |  |
| OVERDRILLING                                         |                    | (feet)             | Stick up Top TO TI                         |  |  |  |
| Interval Drilled                                     |                    |                    |                                            |  |  |  |
| Drilling Method(s)                                   |                    |                    | Soil?                                      |  |  |  |
| Borehole Dia. (in.)                                  |                    |                    | - Concress                                 |  |  |  |
| Temporary Casing Installed? (y/n)                    |                    |                    |                                            |  |  |  |
| Depth temporary casing installed                     |                    | 5                  | PULLED                                     |  |  |  |
| Casing type/dia. (in.)                               |                    |                    | PUC - Growt                                |  |  |  |
| Method of installing                                 |                    |                    | - PUC Grow                                 |  |  |  |
| GAGDIG DVI I DVG                                     |                    |                    | - WELL C                                   |  |  |  |
| CASING PULLING                                       |                    |                    |                                            |  |  |  |
| Method employed                                      | Grout, Pull, Grost | 10                 |                                            |  |  |  |
| Casing retrieved (feet)                              | 16.4 ft            |                    |                                            |  |  |  |
| Casing type/dia. (in.)                               | 2"PVC              |                    |                                            |  |  |  |
| CASE PERFORATING                                     |                    |                    |                                            |  |  |  |
| Equipment used                                       |                    | 15                 |                                            |  |  |  |
| Number of perforations/foot                          |                    | -                  | Bollow                                     |  |  |  |
| Size of perforations                                 |                    |                    | 1 05                                       |  |  |  |
| Interval perforated                                  |                    |                    | // We //                                   |  |  |  |
| GROUTING                                             |                    | 20                 |                                            |  |  |  |
| Interval grouted (FBLS)                              | 1-15.1             |                    | -    /                                     |  |  |  |
| # of batches prepared                                |                    |                    | - $1/$                                     |  |  |  |
| For each batch record:                               |                    |                    | -                                          |  |  |  |
| Quantity of water used (gal.)                        | 18                 |                    |                                            |  |  |  |
| Quantity of cement used (lbs.)                       | 2-bags             | 25                 | <del>-</del>    /                          |  |  |  |
| Cement type                                          | Type Y Portland    |                    |                                            |  |  |  |
| Quantity of bentonite used (lbs.)                    | 1B pounds          |                    | Not                                        |  |  |  |
| Quantity of calcium chloride used (lbs.)             |                    |                    |                                            |  |  |  |
| Volume of grout prepared (gal.)                      |                    | _                  | DRILLED                                    |  |  |  |
| Volume of grout used (gal.)                          | 15901              | 30                 |                                            |  |  |  |
| COMMENTS: A (1                                       | 15-113             |                    |                                            |  |  |  |
| COMMENTS: Depth to water =                           | 13.43 Ft from TOC  | * Sketch in all re | elevant decommissioning data, including:   |  |  |  |
| Billed Cocked out end cap. Loaded casing with grout. |                    | interval overdrill | ed, interval grouted, casing left in hole, |  |  |  |
| Pulled casing. Grated remaining borehole.            |                    | well stickup, etc. |                                            |  |  |  |
| Added soil in top.                                   |                    |                    |                                            |  |  |  |

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING                                                                      | G RECORD           |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|-------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Site Name: Seneca Army Depot                                                              |                    | Well ID:                                                                        | MW 27-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Site Location: SEAD 27                                                                    |                    | Driller: Joe Menzel                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Drilling Company: G-Cologic Nor                                                           | th Star            | Inspector: Scott Dillman                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| 3                                                                                         |                    | Date: 9/23/10                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| DECOMMISSIONIN                                                                            | IG DATA            | 24.0.                                                                           | WELL SCHEMA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | TIC*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| DECOMMISSIONING DATA (Fill in all that apply)                                             |                    | Depth                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3ff 17.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| (                                                                                         | 77                 | (feet)                                                                          | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Commi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| OVERDRILLING                                                                              |                    | 0                                                                               | stick<br>Rumov                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | TOP TO TO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| Interval Drilled                                                                          |                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4 5011                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| Drilling Method(s)                                                                        |                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Fgravel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| Borehole Dia. (in.)                                                                       |                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Temporary Casing Installed? (y/n)                                                         |                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Depth temporary casing installed                                                          |                    | 5                                                                               | puille                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Δ       Δ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| Casing type/dia. (in.)                                                                    |                    |                                                                                 | - PULLEI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Grout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| Method of installing                                                                      |                    |                                                                                 | WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | . 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| CASING DIE LING                                                                           |                    |                                                                                 | WE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| CASING PULLING Method employed                                                            |                    | 10                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|                                                                                           | Grout, Pull, Grait | 10                                                                              | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Casing retrieved (feet) Casing type/dia. (in.)                                            | 2"PVC              |                                                                                 | ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Accompany of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the cont |  |
| Casing type/dia. (iii.)                                                                   | 2 146              | ,                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| CASE PERFORATING                                                                          |                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |  |
| Equipment used                                                                            |                    | 15                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR |  |
| Number of perforations/foot                                                               |                    |                                                                                 | · Attentioner                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | H1. H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| Size of perforations                                                                      |                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Botton                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| Interval perforated                                                                       |                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | of.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
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| GROUTING                                                                                  |                    | 20                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Interval grouted (FBLS)                                                                   | 1-14.9 ft          |                                                                                 | COMPANIAL STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF | 1/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| # of batches prepared                                                                     |                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <i>Y</i> ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| For each batch record:                                                                    |                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Quantity of water used (gal.)                                                             | 18                 | 3 ~                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Quantity of cement used (lbs.)                                                            | 2-6ags             | 25                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Cement type                                                                               | Type I Portland    |                                                                                 | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Quantity of bentonite used (lbs.)                                                         | 10 pounds          |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | NOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| Quantity of calcium chloride used (lbs.)                                                  |                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DRILLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| Volume of grout prepared (gal.)                                                           |                    | 20                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Volume of grout used (gal.)                                                               | 18gal              | 30                                                                              | the spinor cond                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| COMMENTS: Depth to water                                                                  | ( 17 ( ) )         |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|                                                                                           | = 6.33 ft from TOC | * Sketch in all re                                                              | elevant decommissioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | data, including:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| Knocked out end cap. Loaded casing with grout. Rilled casing. Growted remaining borehole. |                    | interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Added soil in top.                                                                        | maining vorehole.  | Sirvinap, vio.                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| TOWNER SOIL ON LOBO                                                                       |                    |                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING F                         | RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
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| Site Name: Seneca Army Depot                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Well ID: MW 27-2                       |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Site Location: SEAD 27                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Driller:                               | JOE MENZE                               | - 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| Drilling Company: Geologic North Star          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |                                         | THE RESERVE THE PERSON NAMED IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 IN COLUMN 2 I |  |
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| GROUTING                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20                                     |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
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| Quantity of water used (gal.)                  | 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | *************************************** | <i>Y</i> 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| Quantity of cement used (lbs.)                 | 2-6095                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 25                                     |                                         | 1/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| Cement type                                    | Type I Portland                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
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| COMMENTS: Depth to water =                     | 6.25 At from TOC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | * Sketch in all rel                    | levant decommissioning data,            | , including:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
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| Added soil on top.                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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Geologic North Star

Drilling Contractor

#### WELL DECOMMISSIONING RECORD Seneca Site Name: Well ID: Site Location: SEA D Steve Larance Driller: Drilling Company: Inspector: Ben McAilister Date: DECOMMISSIONING DATA WELL SCHEMATIC\* (Fill in all that apply) Depth (feet) stick up **OVERDRILLING** TOP TO TO Interval Drilled Soil Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) PUC Method of installing WELL CASING PULLING Method employed 10 Casing retrieved (feet) Well Casing type/dia. (in.) CASE PERFORATING Equipment used 15 Number of perforations/foot Size of perforations Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) pounds NOT Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) Volume of grout used (gal.) 30 COMMENTS: Depth to water = 5.0 \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, browted remaining boreh well stickup, etc.

Geologic North Star

| WELL DECOMMISSIONING                                                     | RECORD             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •                                          |  |
|--------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--|
| Site Name: Seneca Army Depot                                             |                    | Well ID: MW48-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |
| Site Location: SEAD - 48                                                 |                    | Driller:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | David Lion                                 |  |
| Drilling Company: G-eologic North                                        | 1 Star             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Scott Dillman                              |  |
| J 3                                                                      |                    | Date: 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 121/10                                     |  |
| DECOM MISSIONING                                                         | ひんでん               | Date.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                            |  |
| DECOMMISSIONING                                                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | WELL SCHEMATIC*                            |  |
| (Fill in all that app                                                    | iy)                | Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2.7' , 10                                  |  |
| OVERDRILLING                                                             |                    | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | stick up Top TO TO                         |  |
| Interval Drilled                                                         |                    | -0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |  |
| Drilling Method(s)                                                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - Soil                                     |  |
| Borehole Dia. (in.)                                                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ·                                          |  |
| Temporary Casing Installed? (y/n)                                        |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |
| Depth temporary casing installed                                         | -                  | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                            |  |
| Casing type/dia. (in.)                                                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PULLED                                     |  |
| Method of installing                                                     |                    | dragger                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PUC - Grout                                |  |
|                                                                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PULLED Growt                               |  |
| CASING PULLING                                                           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |
| Method employed                                                          | 2 4 0 1 4 1        | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | - //                                       |  |
| Casing retrieved (feet)                                                  | Grout, Pull, Growt | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |  |
|                                                                          | 10.94.             | And the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s | <b>-</b>                                   |  |
| Casing type/dia. (in.)                                                   | 2 FVL              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |
| CASE PERFORATING                                                         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |
| Equipment used                                                           |                    | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <u> </u>                                   |  |
| Number of perforations/foot                                              |                    | 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |  |
| Size of perforations                                                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | _ //                                       |  |
| Interval perforated                                                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | / / /                                      |  |
| interval perforated                                                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | /                                          |  |
| GROUTING                                                                 |                    | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <u> </u>                                   |  |
| Interval grouted (FBLS)                                                  | 1 2 3              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>—</b>                                   |  |
| # of batches prepared                                                    | 1-112              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | _     /                                    |  |
| For each batch record:                                                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | /                                          |  |
| Quantity of water used (gal.)                                            |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |
| Quantity of water used (gar.)  Quantity of cement used (lbs.)            | 18                 | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | /                                          |  |
| Cement type                                                              | 2-6ags             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |
|                                                                          | Type Y Portland    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |
| Quantity of bentonite used (lbs.)                                        | 16 pounds          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Not                                        |  |
| Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DRILLED                                    |  |
| Volume of grout used (gal.)                                              |                    | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |  |
| volume of grout used (gai.)                                              | - I gall           | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |  |
| COMMENTS: Depth to water =                                               | 78660              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |  |
|                                                                          | 7.85 ft from TOC   | * Sketch in all rel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | evant decommissioning data, including:     |  |
| Rucked out end cap. Loaded.                                              | asing with grout.  | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ed, interval grouted, casing left in hole, |  |
|                                                                          | aining porehole.   | non snokup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                            |  |
| Added soil in top.                                                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Į.                                         |  |

Geologic North Star

| WELL DECOMMISSIONING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                             |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------|----------------|
| Site Name: <b>SE40 - 48</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Part of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the seco | Well ID:           | MW 48-4                     |                |
| Site Location: Pichblevel & Journ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Driller:           | 11100 40 1                  |                |
| Drilling Company: Below NS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Inspector:         |                             |                |
| The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Date:              |                             |                |
| DECOMMISSIONING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Date.              | IVEL COME                   | TT Cot         |
| (Fill in all that app                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Donth              | WELL SCHEMA                 | TIC*           |
| (1 III III ali tilat app                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | oly)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Depth<br>(feet)    |                             | 1 1 202 3      |
| OVERDRILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (leet)             |                             |                |
| Interval Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    | -                           |                |
| Drilling Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                             |                |
| Borehole Dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                             | / : \          |
| Temporary Casing Installed? (y/n)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                             | (   )          |
| Depth temporary casing installed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2                  |                             |                |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    | -                           |                |
| Method of installing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                             |                |
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| CASING PULLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4                  |                             |                |
| Method employed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Pull                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7                  |                             |                |
| Casing retrieved (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 11 51                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                             |                |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2"pvc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                             |                |
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| CASE PERFORATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 6                  |                             | 1/5            |
| Equipment used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                  |                             |                |
| Number of perforations/foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                             |                |
| Size of perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                             |                |
| Interval perforated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                             |                |
| CROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <u>%</u>           |                             |                |
| GROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 7 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                             |                |
| Interval grouted (FBLS) # of batches prepared                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 7.31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                             |                |
| For each batch record:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                             |                |
| Quantity of water used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1000/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                             |                |
| Quantity of water used (gai.)  Quantity of cement used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1030                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10                 |                             |                |
| Cement type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.00 (RS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                             |                |
| Quantity of bentonite used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10/65                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                             | Y 1/ 1         |
| Quantity of calcium chloride used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10103                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                             | - Land         |
| Volume of grout prepared (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                             | 101/           |
| Volume of grout used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 12                 |                             |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                             |                |
| COMMENTS:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | * Sketch in all re | elevant decommissioning     | data including |
| part ed cap, tremuse,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | roct, Pull                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    | led, interval grouted, casi |                |
| protecties code Top off                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | with Court                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | well stickup, etc  |                             |                |
| backful , No water                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                             |                |

Drilling Contractor

Department Representative

Costy pulled
3 bollowers & concerepad with protection core

MW 48-5

#### Table 2-4 Well Decommissioning Record Well Abandonment Plan Seneca Army Depot Activity

| WELL DECOMMISSIONING                             | RECORD       |                    |                                             |
|--------------------------------------------------|--------------|--------------------|---------------------------------------------|
| Site Name: SEAP 48                               |              | Well ID:           | uw 48-5                                     |
|                                                  | ovose.       | Driller:           | 700                                         |
|                                                  | over.        | +                  |                                             |
| Drilling Company:                                |              | Inspector:         | ****                                        |
|                                                  |              | Date:              |                                             |
| DECOMMISSIONING                                  |              | 1                  | WELL SCHEMATIC*                             |
| (Fill in all that ap                             | ply)         | Depth              |                                             |
| OVERDRILLING                                     |              | (feet)             | / su = 4                                    |
| Interval Drilled                                 |              |                    | <b>–</b>                                    |
| Drilling Method(s)                               |              |                    |                                             |
| Borehole Dia. (in.)                              |              |                    | —   /·                                      |
| Temporary Casing Installed? (y/n)                |              | 7                  | <del>-</del>    /                           |
| Depth temporary casing installed                 |              |                    |                                             |
| Casing type/dia. (in.)                           |              |                    | -                                           |
| Method of installing                             |              |                    |                                             |
|                                                  | <u> </u>     |                    |                                             |
| CASING PULLING                                   | -            |                    |                                             |
| Method employed                                  | Pull         |                    |                                             |
| Casing retrieved (feet)                          | 1264         |                    |                                             |
| Casing type/dia. (in.)                           | 2000         |                    | _     1   \                                 |
| OAGE DEDECD AND IO                               |              |                    | - $ /  /  $                                 |
| CASE PERFORATING                                 |              | 9                  | _ / / /                                     |
| Equipment used                                   |              |                    |                                             |
| Number of perforations/foot Size of perforations |              |                    | - $ $ $ $ $ $ $ $                           |
| Interval perforated                              |              |                    | <u> </u>                                    |
| interval perforated                              |              |                    | <b>→</b> / / / /                            |
| <u>GROUTING</u>                                  |              | 1 12               | <del> </del>                                |
| Interval grouted (FBLS)                          | 1354         |                    | <del> </del>                                |
| # of batches prepared                            | 1511         |                    |                                             |
| For each batch record:                           |              |                    | <u> </u>                                    |
| Quantity of water used (gal.)                    | 18           | 1                  | <del>-</del>                                |
| Quantity of cement used (lbs.)                   | 138          | 15                 |                                             |
| Cement type                                      | power #      |                    |                                             |
| Quantity of bentonite used (lbs.)                | 10 lbs       |                    |                                             |
| Quantity of calcium chloride used (lbs.)         |              |                    |                                             |
| Volume of grout prepared (gal.)                  |              | 18                 |                                             |
| Volume of grout used (gal.)                      |              | 10                 |                                             |
| COLO ADVITO                                      |              | 1                  | 15.5                                        |
| COMMENTS:                                        | 10 mm la     |                    | elevant decommissioning data, including:    |
| , ITTO I                                         | semmle grout | well stickup, etc. | led, interval grouted, casing left in hole, |
| pull casely top off gui                          | 101 Backell  | , , , , ,          |                                             |
| V 1                                              |              |                    |                                             |

Pull Casks
3Bollands
1 probedue cover & pad

Department Representative

EP PD

| WELL DECOMMISSIONING I                                       | RECORD        |                     |                                         |                 |
|--------------------------------------------------------------|---------------|---------------------|-----------------------------------------|-----------------|
| Site Name: SEAD 48                                           |               | Well ID:            | MW-48-6                                 |                 |
|                                                              | 0/350         | Driller:            | 1110 40 0                               |                 |
| Drilling Company: Greate NS                                  | 002           | Inspector:          |                                         |                 |
| Dinning company.                                             |               |                     |                                         |                 |
| DEGOL B (IGGIOVIDIO                                          | DATA          | Date:               |                                         |                 |
| DECOMMISSIONING                                              |               | 1                   | WELL SCHEMATIC*                         | () (            |
| (Fill in all that appl                                       | у)            | Depth               | 1 /                                     | 130 race        |
| <u>OVERDRILLING</u>                                          |               | (feet)              |                                         |                 |
| Interval Drilled                                             |               |                     |                                         |                 |
| Drilling Method(s)                                           |               |                     |                                         | $1 \setminus 1$ |
| Borehole Dia. (in.)                                          |               |                     |                                         |                 |
| Temporary Casing Installed? (y/n)                            |               |                     |                                         |                 |
| Depth temporary casing installed                             |               | 2                   |                                         |                 |
| Casing type/dia. (in.)                                       |               |                     |                                         | 1   1           |
| Method of installing                                         |               |                     |                                         |                 |
| CARDIO DULLINO                                               |               |                     |                                         | 1 / 1           |
| CASING PULLING Method complexed                              | 0.17          | /1                  | 1                                       | 1 / 1           |
| Method employed Casing retrieved (feet)                      | PSIL          |                     |                                         |                 |
| Casing type/dia. (in.)                                       | 1 // Orr      |                     | <u> </u>                                |                 |
| Cashig type/dia. (iii.)                                      | L' lave       |                     | — /                                     | 1               |
| CASE PERFORATING                                             |               |                     |                                         | 1 > 181         |
| Equipment used                                               |               | 1 6                 |                                         | 1/4             |
| Number of perforations/foot                                  |               |                     | - /                                     | 1 / 1           |
| Size of perforations                                         |               |                     | $\dashv$ $V$                            |                 |
| Interval perforated                                          |               |                     | <del>-</del> 1                          | \               |
|                                                              |               | Ø.                  |                                         | ,               |
| <u>GROUTING</u>                                              |               |                     |                                         | /               |
| Interval grouted (FBLS)                                      | 84            |                     |                                         | /               |
| # of batches prepared                                        |               |                     |                                         | 1/              |
| For each batch record:                                       |               |                     | /                                       |                 |
| Quantity of water used (gal.) Quantity of cement used (lbs.) | 1/2           | 1 12                |                                         | 1186            |
| Cement type                                                  | Doubled to    |                     | Problems                                |                 |
| Quantity of bentonite used (lbs.)                            | 10//-         |                     |                                         |                 |
| Quantity of calcium chloride used (lbs.)                     | 10165         |                     |                                         |                 |
| Volume of grout prepared (gal.)                              |               |                     |                                         |                 |
| Volume of grout used (gal.)                                  |               |                     |                                         |                 |
|                                                              |               |                     |                                         | 1               |
| COMMENTS:                                                    |               | * Sketch in all rel | levant decommissioning data, includ     | ding            |
| Derforate end cop-temm                                       |               | interval overdrille | ed, interval grouted, casing left in ho | ole,            |
| pull pre cosy. Top off                                       |               | well stickup, etc.  |                                         |                 |
| "COVER" & Bolloids , Backa                                   | WILL WITH SUM |                     |                                         |                 |

Drilling Contractor

Department Representative

Costry pulled 11ft Recovered 3 bollads & 1 probedue costs & pad.

D= (1.0)
Grab:
W= 544

| WELL DECOMMISSIONING REC                              | CORD                                            |                   |                                                    |
|-------------------------------------------------------|-------------------------------------------------|-------------------|----------------------------------------------------|
|                                                       |                                                 |                   | 1118-7                                             |
| Site Name: Seneca Army Dep.<br>Site Location: SEAD-48 | ot                                              |                   | MW48-7                                             |
| Site Location: SEAD -48                               |                                                 | Driller:          | de Menze                                           |
| Drilling Company: Geologic North                      | Star                                            | Inspector:        | Scott Dillman                                      |
|                                                       | 2000年1月1日 日本日本日本日本日本日本日本日本日本日本日本日本日本日本日本日本日本日本日 | Date: 9           | 122/10                                             |
| DECOMMISSIONING DA                                    | TA                                              |                   | WELL SCHEMATIC*                                    |
| (Fill in all that apply)                              |                                                 | Depth             | 2.1 11.4                                           |
|                                                       |                                                 | (feet)            |                                                    |
| OVERDRILLING                                          |                                                 | -0                | Mimored                                            |
| Interval Drilled                                      |                                                 |                   | Soil                                               |
| Drilling Method(s)                                    |                                                 |                   |                                                    |
| Borehole Dia. (in.)                                   |                                                 |                   | $\rightarrow$ $(1 \downarrow 1)$                   |
| Temporary Casing Installed? (y/n)                     |                                                 | 5                 |                                                    |
| Depth temporary casing installed                      |                                                 |                   | PULLED                                             |
| Casing type/dia. (in.)                                |                                                 |                   | - MIC Grow                                         |
| Method of installing                                  |                                                 |                   | /(1   2                                            |
|                                                       |                                                 |                   | CARING                                             |
| CASING PULLING                                        | ( ) ( ) ( ) ( )                                 | 10                | - 1 1 1 1 1 Tu                                     |
| Method employed                                       | Grout, Pull, Growt                              |                   | SCREEN BOTTOM                                      |
| Casing retrieved (feet)                               | 2"PVC                                           |                   | 0 D a V E /                                        |
| Casing type/dia. (in.)                                | 2 rvc                                           |                   | - OFF                                              |
| CASE DEDECD ATING                                     |                                                 |                   | 3.484                                              |
| CASE PERFORATING Equipment used                       |                                                 | 15                | Graphae!                                           |
| Number of perforations/foot                           |                                                 |                   | · <del>-  </del>   /                               |
| Size of perforations                                  |                                                 |                   |                                                    |
| Interval perforated                                   |                                                 |                   |                                                    |
| Interval perferated                                   |                                                 | <b></b>           | $\neg$                                             |
| GROUTING                                              |                                                 | 20                | <b>-</b>                                           |
| Interval grouted (FBLS)                               | 1-9.3 CA                                        |                   |                                                    |
| # of batches prepared                                 |                                                 |                   |                                                    |
| For each batch record:                                |                                                 |                   |                                                    |
| Quantity of water used (gal.)                         | 18                                              | 3 ~               |                                                    |
| Quantity of cement used (lbs.)                        | 2-6995                                          | 25                |                                                    |
| Cement type                                           | Type I Portland                                 |                   |                                                    |
| Quantity of bentonite used (lbs.)                     | 10 pounds                                       |                   | Not                                                |
| Quantity of calcium chloride used (lbs.)              |                                                 |                   | DRILLED                                            |
| Volume of grout prepared (gal.)                       |                                                 | 20                |                                                    |
| Volume of grout used (gal.)                           | 9gal.                                           | 30                |                                                    |
| COM A CONTROL A 1/1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 771 (12 = =                                     | ı                 |                                                    |
| COMMENTS: Depth to water = 7                          | 7.71 ft from TOC                                |                   | relevant decommissioning data, including:          |
|                                                       | sing with grout.                                | well stickup, etc | lled, interval grouted, casing left in hole,<br>c. |
| Piled casing. Grated rema                             |                                                 |                   |                                                    |
| Added soil on top. Next to                            | BIDG ED 708.                                    |                   |                                                    |

Geologic North Star
Drilling Contractor

| WELL DECOMMISSIONING R                      | ECORD              |                                           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------|--------------------|-------------------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: Seneca Army Depot                |                    | Well ID:                                  | MW48-8                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Site Location: SEAD-48                      |                    | Driller:                                  | see Man                                 | WHEN PERSON AND DESCRIPTION OF THE PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AND PERSON AN |
| Drilling Company: G-eologic North           | Star               |                                           | Scott Dilln                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                             |                    | Date: 9                                   | 1/22/10                                 | lari                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| DECOMMISSIONING D                           | ΑΛΤΛ               | Bute. 1                                   | 1 1 1                                   | 707 O.4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| (Fill in all that apply)                    |                    | Depth                                     | WELL SCHEMA                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| (2 to the and apply)                        | ,                  | (feet)                                    | 4                                       | 4 84                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| OVERDRILLING                                | ,                  | 0                                         | stick Remove                            | 70 TO TO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Interval Drilled                            |                    |                                           | · receipt                               | Soil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Drilling Method(s)                          |                    |                                           |                                         | 1-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Borehole Dia. (in.)                         |                    |                                           | *************************************** | /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Temporary Casing Installed? (y/n)           |                    | _                                         |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Depth temporary casing installed            |                    | 5                                         | - PULLEL                                | <b>)</b>       .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Casing type/dia. (in.) Method of installing |                    |                                           | 0116                                    | 7 Forout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Interior of histatting                      |                    |                                           | PUCT                                    | . 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| CASING PULLING                              |                    |                                           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Method employed                             | Grout, Pull, Grait | 10                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Casing retrieved (feet)                     | QC4                |                                           |                                         | / /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Casing type/dia. (in.)                      | Z"PVC              |                                           | *                                       | 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                             |                    |                                           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CASE PERFORATING                            |                    |                                           |                                         | <b>Y</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Equipment used                              |                    | 15                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Number of perforations/foot                 |                    |                                           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Size of perforations                        |                    |                                           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Interval perforated                         |                    |                                           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| GROUTING                                    |                    | 20                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Interval grouted (FBLS)                     | 1-1                |                                           | Philippens                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| # of batches prepared                       | - 6                |                                           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| For each batch record:                      |                    |                                           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of water used (gal.)               | 18                 |                                           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of cement used (lbs.)              | 26095              | 25                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Cement type                                 | Type Y Portland    |                                           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Quantity of bentonite used (lbs.)           | 18 pounds          |                                           |                                         | NOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Quantity of calcium chloride used (lbs.)    |                    |                                           | *************************************** | DRILLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Volume of grout prepared (gal.)             |                    | ~ ~                                       |                                         | DRICCED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Volume of grout used (gal.)                 | Sgal               | _30_                                      |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| COMMENTS: Death to water = (                | 9                  |                                           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                             | 39 Ft from TOC     | * Sketch in all rel                       | levant decommissioning d                | ata, including:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Pulled casing. Growted rema                 | sing with grout.   | interval overdrille<br>well stickup, etc. | ed, interval grouted, casing            | g left in hole,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Added soil on top.                          | ining vorehole.    | onoxup, etc.                              |                                         | Homeway                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                             |                    |                                           |                                         | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

Geologic North Star

| WELL DECOMMISSIONING RECORD                                                                                                           |                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: SENECH ARMY NEPST                                                                                                          | Well ID: M W 59-1                                                                                                                        |
| Site Location: 5EAN - 59                                                                                                              | Driller: Barid Light 5                                                                                                                   |
| Drilling Company: Gedogic North star                                                                                                  | Inspector: Scatt Dillyan                                                                                                                 |
| Standard Company                                                                                                                      | Date: 1/25/2011                                                                                                                          |
| DECOMMISSIONING DATA                                                                                                                  |                                                                                                                                          |
| (Fill in all that apply)                                                                                                              | Depth 2 Checken                                                                                                                          |
| (I iii iii aii that appry)                                                                                                            | (fant) 2 STICITY 1 1 - PT                                                                                                                |
| OVERDRILLING                                                                                                                          | (1881) O Removed TD                                                                                                                      |
| Interval Drilled                                                                                                                      |                                                                                                                                          |
| Drilling Method(s)                                                                                                                    | -       9.3                                                                                                                              |
| Borehole Dia. (in.)                                                                                                                   |                                                                                                                                          |
| Temporary Casing Installed? (y/n)                                                                                                     |                                                                                                                                          |
| Depth temporary casing installed                                                                                                      | 5 Pulled Grow                                                                                                                            |
| Casing type/dia. (in.)                                                                                                                | 110                                                                                                                                      |
| Method of installing                                                                                                                  | - well                                                                                                                                   |
| CASING PULLING                                                                                                                        | 10 = 2" 7.3                                                                                                                              |
|                                                                                                                                       | 10 - 2   113                                                                                                                             |
| Casing retrieved (feet)  Casing retrieved (feet)                                                                                      |                                                                                                                                          |
| Casing type/dia. (in.)                                                                                                                |                                                                                                                                          |
| CASE PERFORATING                                                                                                                      |                                                                                                                                          |
| Equipment used                                                                                                                        |                                                                                                                                          |
| Number of perforations/foot                                                                                                           |                                                                                                                                          |
| Size of perforations Interval perforated                                                                                              |                                                                                                                                          |
| interval periorated                                                                                                                   |                                                                                                                                          |
| GROUTING                                                                                                                              |                                                                                                                                          |
| Interval grouted (FBLS)                                                                                                               |                                                                                                                                          |
| # of batches prepared                                                                                                                 | _ NOT                                                                                                                                    |
| For each batch record:                                                                                                                |                                                                                                                                          |
| Quantity of water used (gal.)  Quantity of cement used (lbs.)                                                                         | _ Dille                                                                                                                                  |
|                                                                                                                                       |                                                                                                                                          |
| Cement type Quantity of bentonite used (lbs.)                                                                                         |                                                                                                                                          |
| Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.)                                                           | _                                                                                                                                        |
| Volume of grout prepared (gal.)                                                                                                       | <del>-</del>     /                                                                                                                       |
| Volume of grout used (gal.)                                                                                                           | /                                                                                                                                        |
| COMMENTS: Proth to water = 3.84 ft. fm To<br>Knocked out end plug: Loaded casing with<br>grout. Pulled casing a Recovered all, Topped | * Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING RECORD                                               |                                                           |
|---------------------------------------------------------------------------|-----------------------------------------------------------|
| Site Name: Seneca Army Depot                                              | Well ID: MW 59-2                                          |
| Site Name: Seneca Army Depot Site Location: SEAD 59                       | Driller: Steve Larance                                    |
| Drilling Company: Geologic North Star                                     | Inspector: Scott Dillman                                  |
| Diffiling Company. Coolegate 1001 1 100                                   | Date: 9/24/10                                             |
| DECOMPTION TO A TA                                                        | WELL SCHEMATIC*                                           |
| DECOMMISSIONING DATA (Fill in all that apply)                             | Depth 170 13-2                                            |
| (Fill ill gil mar abbid)                                                  | (feet)                                                    |
| OVERDRILLING                                                              | O Stick up Top TOT                                        |
| Interval Drilled                                                          | 4 501                                                     |
| Drilling Method(s)                                                        |                                                           |
| Borehole Dia. (in.)                                                       |                                                           |
| Temporary Casing Installed? (y/n)                                         |                                                           |
| Depth temporary casing installed                                          | 5 JOSHED ,                                                |
| Casing type/dia. (in.)                                                    | 5 PULL & Growth                                           |
| Method of installing                                                      |                                                           |
|                                                                           | WE -                                                      |
| CASING PULLING                                                            |                                                           |
| Method employed Grout, Poll, Grat                                         | 10                                                        |
| Casing retrieved (feet)                                                   | 1 104                                                     |
| Casing type/dia. (in.)                                                    | Polla                                                     |
|                                                                           | 11.5 Batta                                                |
| CASE PERFORATING                                                          | 1 Lei                                                     |
| Equipment used                                                            | 15 ]                                                      |
| Number of perforations/foot                                               |                                                           |
| Size of perforations                                                      |                                                           |
| Interval perforated                                                       |                                                           |
| an average to                                                             | 20 - 1                                                    |
| GROUTING                                                                  |                                                           |
| Interval grouted (FBLS)                                                   |                                                           |
| # of batches prepared                                                     |                                                           |
| For each batch record: Quantity of water used (gal.)                      |                                                           |
|                                                                           | 25 - /                                                    |
| Quantity of cement used (lbs.)  Cement type  Type I for the ad            |                                                           |
| Quantity of bentonite used (lbs.)                                         | -   Not                                                   |
| Quantity of bencome used (lbs.)  Quantity of calcium chloride used (lbs.) |                                                           |
| Volume of grout prepared (gal.)                                           | DRILLE                                                    |
| Volume of grout used (gal.)                                               | 30 -                                                      |
| Totalito of grown about (Smr)                                             |                                                           |
| COMMENTS: Depth to water = 6.96 ft from TOC                               | * Sketch in all relevant decommissioning data, including: |
| Knocked out end cap. Loaded casing with grout.                            |                                                           |
| Pulled casing. Growted remaining borehole.                                | well stickup, etc.                                        |
| Added soil in top.                                                        | <b>1</b>                                                  |

Geologic North Star
Drilling Contractor

| WELL DECOMMISSIONING R                   | ECORD                                   |                     |                         | ,                               |                |
|------------------------------------------|-----------------------------------------|---------------------|-------------------------|---------------------------------|----------------|
| Site Name: Seneca Army Depot             |                                         | Well ID:            | MW59-4                  | 4                               |                |
| Site Location: SEAD 59                   | <del>701</del>                          | Driller:            | loe men                 | THE RESERVE THE PERSON NAMED IN |                |
| Drilling Company: G-eologic North        | Star                                    |                     | Scott Dil               |                                 |                |
|                                          | 5 100                                   | Date: 9             | 2 - 1                   | PROP                            | ************** |
| DECOMMISSIONING I                        | )ATA                                    |                     | * /                     | mich                            |                |
| (Fill in all that apply                  |                                         | Depth               | WELL SCHEM              | IATIC*                          | 010            |
| (1 III iii aii tiiat appty               |                                         | (feet)              | Ι.                      | . 5 A                           | 8.6 ft         |
| OVERDRILLING                             |                                         | (1001)              | 541                     | ak up                           | TOP TO TO      |
| Interval Drilled                         |                                         |                     | 1021                    | evea                            | 4 Soil         |
| Drilling Method(s)                       |                                         |                     |                         | 4                               | 7 361          |
| Borehole Dia. (in.)                      | 3 12 XXX - 11 XX                        |                     |                         |                                 | 1              |
| Temporary Casing Installed? (y/n)        |                                         |                     |                         | - 11                            |                |
| Depth temporary casing installed         |                                         | 5                   | المام المام             | LED                             |                |
| Casing type/dia. (in.)                   |                                         |                     | - 100                   | -                               | Grout          |
| Method of installing                     |                                         |                     | PUC                     |                                 | 10700          |
|                                          |                                         |                     | - WE                    | LC 12                           | Bottan         |
| CASING PULLING                           |                                         |                     |                         |                                 | OR             |
| Method employed                          | Grout, Pull, Grait                      | 10                  |                         |                                 | 15011          |
| Casing retrieved (feet)                  | 8,6ft                                   |                     |                         | 1                               | well           |
| Casing type/dia. (in.)                   | 2" PVC                                  |                     |                         |                                 |                |
| CASE PERFORATING                         |                                         |                     |                         | V                               |                |
| Equipment used                           |                                         | 15                  |                         |                                 | 1              |
| Number of perforations/foot              |                                         |                     |                         |                                 | /              |
| Size of perforations                     |                                         |                     |                         |                                 |                |
| Interval perforated                      |                                         |                     |                         | ľ                               |                |
| GROUTING                                 |                                         | 20                  |                         |                                 |                |
| Interval grouted (FBLS)                  |                                         |                     | -                       | V                               | 1 1            |
| # of batches prepared                    |                                         |                     |                         | 4                               | . 1            |
| For each batch record:                   |                                         |                     | _                       |                                 |                |
| Quantity of water used (gal.)            | 18                                      |                     |                         | /                               | 1 1            |
| Quantity of cement used (lbs.)           | 26095                                   | 25                  | -                       |                                 |                |
| Cement type                              | Type Y Portland                         | -                   |                         |                                 |                |
| Quantity of bentonite used (lbs.)        | 10 00000005                             |                     |                         | ľ                               | NOT            |
| Quantity of calcium chloride used (lbs.) | 113/1501583                             |                     |                         |                                 |                |
| Volume of grout prepared (gal.)          |                                         |                     |                         |                                 | DRILLED        |
| Volume of grout used (gal.)              | Real                                    | 30                  |                         | Y                               | 1              |
|                                          | , , , , , , , , , , , , , , , , , , , , |                     | ( <del></del>           | L                               | -              |
| COMMENTS: Depth to water =               | 9.4 ft from TOC                         | * Sketch in all rel | levant decommissioni    | ing data, inclu                 | ding:          |
|                                          | asing with grout.                       | interval overdrille | ed, interval grouted, c | asing left in h                 | ole,           |
| Pulled casing. Growted rema              | lining borehole.                        | well stickup, etc.  |                         |                                 |                |
| Added soil in top.                       |                                         |                     |                         |                                 | 1              |

Geologic North Star

**Drilling Contractor** 

| WELL DECOMMISSIONING RECOR                          | D              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •               |  |  |
|-----------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--|--|
| Site Name: Seneca Army Depot                        |                | Well ID: /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Well ID: MW 59-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |  |  |
| Site Name: Seneca Acmy Depot Site Location: SEAD 59 |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | feve Lara                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | mee             |  |  |
|                                                     |                | THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Scott Dillmo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |  |  |
| Drilling Company: Geologic North Star               |                | Date: 9 /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 124/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <u> </u>        |  |  |
|                                                     |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | C*              |  |  |
| DECOMMISSIONING DATA                                |                | Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | WELL SCHEMATI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1470            |  |  |
| (Fill in all that apply)                            |                | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2.75                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | + 17,1+4        |  |  |
| OVEDDBH I INC                                       |                | · O                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | stick of<br>Ramove                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TOPTOTO         |  |  |
| OVERDRILLING                                        |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Morneyer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4- 501          |  |  |
| Interval Drilled                                    |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1               |  |  |
| Drilling Method(s)  Borehole Dia. (in.)             |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •               |  |  |
| Temporary Casing Installed? (y/n)                   |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
| Depth temporary casing installed                    |                | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | PULLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |  |  |
| Casing type/dia. (in.)                              |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | POL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Growt           |  |  |
| Method of installing                                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | PUCT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 112             |  |  |
| Niction of historing                                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |  |  |
| CASING PULLING                                      |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
|                                                     | t. Pull. Grait | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | anning transmiss                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |  |  |
| Casing retrieved (feet)                             | 54             | CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | \mathrew{4}     |  |  |
| Casing type/dia. (in.)                              | PVC            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
| Casing typoraid. (iii.)                             |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1 - Bottom      |  |  |
| CASE PERFORATING                                    |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 of            |  |  |
| Equipment used                                      |                | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | / Well          |  |  |
| Number of perforations/foot                         |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 1             |  |  |
| Size of perforations                                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
| Interval perforated                                 |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
| Linearing Community                                 |                | 7 .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
| GROUTING                                            |                | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
| Interval grouted (FBLS)                             | 12ft           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |  |  |
| # of batches prepared                               | 1              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
| For each batch record:                              |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | / .             |  |  |
| Quantity of water used (gal.)                       | 8              | r3. eee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
| Quantity of cement used (lbs.) 2-6                  | 095            | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
|                                                     | er Purtland    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
|                                                     | sunds          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | NOT             |  |  |
| Quantity of calcium chloride used (lbs.)            | ,              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DRILLED         |  |  |
| Volume of grout prepared (gal.)                     |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |  |  |
| Volume of grout used (gal.)                         | Zgal           | _30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
|                                                     |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | - Annual Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of t | <del></del>     |  |  |
| COMMENTS: Depth to water = 6.24                     | ft from TOC    | * Sketch in all rele                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | levant decommissioning d                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ata, including: |  |  |
| Knocked out end cap. Loaded casing                  |                | interval overdrille                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ed, interval grouted, casing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | g left in hole, |  |  |
| Pulled casing. Granted remaining                    | borehole.      | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |
| Added soil in top.                                  |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |  |  |

Geologic North Star

| WELL DECOMMISSIONING RECORD                    |                                                              |
|------------------------------------------------|--------------------------------------------------------------|
| Site Name: Seneca Army Depot                   | Well ID: MW 59-8                                             |
| Site Location: SEAD 59                         | Driller: Steve Lavance                                       |
| Drilling Company: G-Pologic North Star         | Inspector: Scott Dillman                                     |
| Diffiling Company.                             | Date: 9/24/10                                                |
| DECOMMISSIONING DATA                           | WELL SCHEMATIC*                                              |
| (Fill in all that apply)                       | a military                                                   |
| (Filt iii aii uiat appiy)                      | (feet)                                                       |
| OVERDRILLING                                   | O SHOK UP TO TO TO                                           |
| Interval Drilled                               | 4 Soil                                                       |
| Drilling Method(s)                             |                                                              |
| Borehole Dia. (in.)                            |                                                              |
| Temporary Casing Installed? (y/n)              |                                                              |
| Depth temporary casing installed               | 5 DULED                                                      |
| Casing type/dia. (in.)                         | 5 PULLED Growt                                               |
| Method of installing                           | WELL HE                                                      |
|                                                | WE-                                                          |
| CASING PULLING                                 |                                                              |
| Method employed Front, Poll, Grait             | 10                                                           |
| Casing retrieved (feet)                        | Botton                                                       |
| Casing type/dia. (in.)                         | ul lot                                                       |
|                                                |                                                              |
| CASE PERFORATING                               | 15 7 Well                                                    |
| Equipment used                                 | 13                                                           |
| Number of perforations/foot                    |                                                              |
| Size of perforations                           |                                                              |
| Interval perforated                            |                                                              |
| GROUTING                                       | 20 -                                                         |
| Interval grouted (FBLS)                        |                                                              |
| # of batches prepared                          |                                                              |
| For each batch record:                         |                                                              |
| Quantity of water used (gal.)                  |                                                              |
| Quantity of cement used (lbs.) 2-6aq5          | 25                                                           |
| Cement type Type Y Particul                    |                                                              |
| Quantity of bentonite used (lbs.)              | Not                                                          |
| Quantity of calcium chloride used (lbs.)       | DRILLE!                                                      |
| Volume of grout prepared (gal.)                |                                                              |
| Volume of grout used (gal.) [3 gal,            | 30                                                           |
|                                                |                                                              |
| COMMENTS: Depth to water = 7.24 ft from TOC    | * Sketch in all relevant decommissioning data, including:    |
| Knocked out end cap. Loaded casing with grout. | interval overdrilled, interval grouted, casing left in hole, |
| Pulled casing. Grated remaining borehole.      | well stickup, etc.                                           |
| Added soil on top.                             |                                                              |

Geologic North Star

| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Site Name: SENECA ARMY DEPOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Well ID: MW63-1                                                                 |
| Site Location: SEAN 63                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Driller: 5 cott Breeds                                                          |
| Drilling Company: Geologic North Star                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Inspector: Scott Allman                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Date: 9 / 14 / 10                                                               |
| DECOMMISSIONING DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | WELL SCHEMATIC*                                                                 |
| (Fill in all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Depth 10                                                                        |
| OVERDRILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (feet) 1.2 TOP TO Acmoded TO                                                    |
| Interval Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Acmosed                                                                         |
| Drilling Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                 |
| Borehole Dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                 |
| Temporary Casing Installed? (y/n)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | G-TouT                                                                          |
| Depth temporary casing installed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                 |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Puled to                                                                        |
| Method of installing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | = PVC<br>weil:                                                                  |
| CASING PULLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ( CD 31 Mg ) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                                |
| Method employed Grant, Pull, brown                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10 portion                                                                      |
| Casing retrieved (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | July Well                                                                       |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                 |
| CASE PERFORATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                 |
| Equipment used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                 |
| Number of perforations/foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1/1/01                                                                          |
| Size of perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | - DRILLED                                                                       |
| Interval perforated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                 |
| GROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                 |
| Interval grouted (FBLS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                 |
| # of batches prepared                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                 |
| For each batch record:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                 |
| Quantity of water used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                 |
| Quantity of cement used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                 |
| Cement type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type  Type | <u> </u>                                                                        |
| Quantity of bentonite used (lbs.)  Quantity of calcium chloride used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                 |
| Volume of grout prepared (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                 |
| Volume of grout used (gal.)  9 991.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <u></u>                                                                         |
| COMMENTS: Depth to water = 8:4 from TOC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | * Sketch in all relevant decommissioning data, including:                       |
| Knock off end plug. Filled casing with grout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |
| Craut. Added Soil on toA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                 |
| - TOTA MANUTER JOI SON TOP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                 |

#### WELL DECOMMISSIONING RECORD ARMY SENECA DEPOT Well ID: Site Name: Site Location: SEAD Driller: Breeds Drilling Company: Geologic North Star Inspector: 34 Tt Willman Date: DECOMMISSIONING DATA WELL SCHEMATIC\* (Fill in all that apply) Depth 1.9' (feet) shale-P OVERDRILLING Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing Bollon CASING PULLING Method employed we V Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING Equipment used Number of perforations/foot Size of perforations Interval perforated GROUTING NOT Interval grouted (FBLS) DRILLED # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) Volume of grout used (gal.) COMMENTS: beth \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc. remaining

Geologic North Star

Drilling Contractor

| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ,                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Site Name: SENECA ARMY DEPOT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Well ID: MW63-3                                                                 |
| Site Location: SEAD 63                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Driller: Scatt Breeds                                                           |
| Drilling Company: Geologic North Star                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Inspector: 5 cost Dilliman                                                      |
| See Jie 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Date: 9/14/10                                                                   |
| DECOMMISSIONING DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7                                         |
| (Fill in all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | WELL SCHEMATIC* Depth                                                           |
| (Fill ill all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Depth (feet) Stickup Top to                                                     |
| OVERDRILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1.5' 9.5'                                                                       |
| Interval Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1 50:1                                                                          |
| Drilling Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                 |
| Borehole Dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                 |
| Temporary Casing Installed? (y/n)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 5 Pulled Growt                                                                  |
| Depth temporary casing installed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                 |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | LUELT I                                                                         |
| Method of installing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CASING                                                                          |
| CASING BUILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Bitton                                                                          |
| Method employed Fill Great Full Great                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1 dwell                                                                         |
| Casing retrieved (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                 |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                 |
| CASE PERFORATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                 |
| Equipment used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1 15                                                                            |
| Number of perforations/foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                 |
| Size of perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Not                                                                             |
| Interval perforated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | - DRILLED                                                                       |
| ODOLUTING.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | - Dietec                                                                        |
| GROUTING Literary Country (CDLC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                 |
| Interval grouted (FBLS) # of batches prepared                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                 |
| For each batch record:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                 |
| Quantity of water used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                 |
| Quantity of cement used (lbs.) 2 bag 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                 |
| Cement type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                 |
| Quantity of bentonite used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                 |
| Quantity of calcium chloride used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                 |
| Volume of grout prepared (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                 |
| Volume of grout used (gal.) ℓ ▷                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                 |
| CONDITION A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA CONTRACTOR A LA | 1                                                                               |
| COMMENTS: De, the to water 6.96 From 10C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | * Sketch in all relevant decommissioning data, including:                       |
| Knocked off end plug. Filed casing with grout.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |
| Grout. Added Soil to around level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                 |
| - 10010 110000 1011 10 AVOUNT 12021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | I                                                                               |

Crologic North Star
Drilling Contractor

| WELL DECOMMISSIONING R                                        | ECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Site Name: Seneca Army Depot                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Well ID: MW67-1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
| Site Location: SEAD 67                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Driller: Scott Breeds |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
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| Volume of grout used (gal.)                                   | 12 gal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 30                    | <del> </del>  /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
| results of grout about (gail.)                                | 12 gal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
| COMMENTS: Depth to water = -                                  | 7.18 Affrom TOC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | * Chearly in - **     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
|                                                               | ising with grout.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | interval overdrille   | evant decommissioning data, including:<br>ed, interval grouted, casing left in hole,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | and Makes   |
|                                                               | ining borehole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | well stickup, etc.    | , and the ground, casing ich in 1016,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |
| Added soil on top.                                            | July - OI ENDIE .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Manufacture |
|                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |

Geologic North Star
Drilling Contractor

#### WELL DECOMMISSIONING RECORD Well ID: Seneca Site Name: Scott Breeds Driller: SEA D Site Location: Inspector: Scott Dillman Drilling Company: G-Cologic North Date: 9/16/10 **WELL SCHEMATIC\*** DECOMMISSIONING DATA (Fill in all that apply) Depth 0.9 12.9 (feet) stick up Rumoved TOP TO TO OVERDRILLING Soil Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Grout Casing type/dia. (in.) PUC Method of installing WELL CASING PULLING 10 Method employed Casing retrieved (feet) Casing type/dia. (in.) Boiton CASE PERFORATING of Equipment used Well Number of perforations/foot Size of perforations Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) 30 Volume of grout used (gal.) ft from TOC \* Sketch in all relevant decommissioning data, including: casing with grout. interval overdrilled, interval grouted, casing left in hole, well stickup, etc. Added

Geologic North Star

#### WELL DECOMMISSIONING RECORD Well ID: Seneca Site Name: Scott Breeds Driller: SEA D Site Location: Inspector: . Drilling Company: North Date: 10 WELL SCHEMATIC\* **DECOMMISSIONING DATA** (Fill in all that apply) Depth 1.5 (feet) stick up TOP TO TO OVERDRILLING Interval Drilled Soil Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) PULLED Depth temporary casing installed Casing type/dia. (in.) PUC Method of installing WELL CASING PULLING 10 Method employed Casing retrieved (feet) Casing type/dia. (in.) Botton oF CASE PERFORATING 15 well Equipment used Number of perforations/foot Size of perforations Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Ouantity of water used (gal.) Quantity of cement used (lbs.) Cement type NOT Quantity of bentonite used (lbs.) Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) 30 Volume of grout used (gal.) COMMENTS: Depth to water \* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, Knocked out end cap. Loaded well stickup, etc.

Geologic North Star

Drilling Contractor

Added

| Well ID: MW 70 -1                                                                          |                  |
|--------------------------------------------------------------------------------------------|------------------|
| Well ID: Mia 70 -1                                                                         |                  |
|                                                                                            |                  |
| Site Legation: SEAN 70 Driller: Scott Dreed                                                |                  |
| Drilling Company: Geologic North Star Inspector: Scott Dilling Date: 9/10/10               | 21               |
| Date: 9/16/10                                                                              |                  |
| WELL SCHEMAT                                                                               | IC*              |
| DECOMMISSIONING DATA                                                                       | 11.8             |
| (feet)                                                                                     |                  |
| \$#IK                                                                                      | TOP TO TO        |
| OVERDRILLING                                                                               | A Soil           |
| Interval Drilled                                                                           |                  |
| Drilling Method(s)                                                                         |                  |
| Borehole Dia. (in.)                                                                        |                  |
| Temporary Casing Installed? (y/n) Depth temporary casing installed                         |                  |
| Depth temporary cashing histaried                                                          | Grout            |
| Casing type/dia. (in.)                                                                     | 1/2              |
| Method of installing                                                                       | 11               |
| CASING PULLING                                                                             | (1 1)            |
| Method employed Grout, Poll, Groat 10                                                      |                  |
| Casing retrieved (feet)                                                                    | Bother           |
| Casing type/dia. (in.)                                                                     | 1 d              |
| casing type/ula. (iii.)                                                                    | 1 ( )            |
| CASE PERFORATING                                                                           | 1 200            |
| Equipment used 15                                                                          |                  |
| Number of perforations/foot                                                                | 1/1              |
| Size of perforations                                                                       | $X \perp$        |
| Interval perforated                                                                        |                  |
|                                                                                            |                  |
| GROUTING 20 —                                                                              |                  |
| Interval grouted (FBLS)                                                                    |                  |
| # of batches prepared                                                                      |                  |
| For each batch record:                                                                     |                  |
| Quantity of water used (gal)                                                               | $\mathcal{X}$    |
| Quantity of water used (gail.)  Quantity of cement used (lbs.)  25                         |                  |
| Cement type Type T furthend                                                                |                  |
| Quantity of bentonite used (lbs.)                                                          | NOT              |
| Quantity of calcium chloride used (lbs.)                                                   | DRILLED          |
| Volume of grout prepared (gal.)                                                            |                  |
| Volume of grout used (gal.)                                                                |                  |
| )                                                                                          | formatelescond.  |
| COMMENTS: Depth to water = 713 ft from TOC * Sketch in all relevant decommissioning        | data, including: |
| Knocked out end cap. Loaded casing with grout. interval overdrilled, interval grouted, cas |                  |
| Pulled casing. Grated remaining borehole. well stickup, etc.                               |                  |
| Added soil in top.                                                                         |                  |

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| WEED DECOMME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                              |
| A A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Well ID: 10-3                                                |
| Site Name: Senera Army Depot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Driller: Scott Breeds                                        |
| Site Location: SEAD 70 J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Inspector: Scott Dillonan                                    |
| Drilling Company: Geologic North Stan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Date: 9/16/10                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | WELL SCHEMATIC*                                              |
| DECOMMISSIONING DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Depth strickup                                               |
| (Fill in all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | (feet) gone -                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | gent >                                                       |
| OVERDRILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                              |
| Interval Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                              |
| Drilling Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                              |
| Borehole Dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                              |
| Temporary Casing Installed? (y/n) Depth temporary casing installed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5 7                                                          |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | - No                                                         |
| Method of installing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | - and                                                        |
| Nethod of histaming                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | - (6.7° K                                                    |
| CASING PULLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - form                                                       |
| Method employed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                              |
| Casing retrieved (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                              |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | _                                                            |
| CASE PERFORATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                              |
| Equipment used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -                                                            |
| Number of perforations/foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                              |
| Size of perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                              |
| Interval perforated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                              |
| GROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                              |
| Interval grouted (FBLS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                              |
| # of batches prepared                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                              |
| For each batch record:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                              |
| Quantity of water used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                              |
| Quantity of cement used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                              |
| Cement type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <del> </del>                                                 |
| Quantity of bentonite used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                              |
| Quantity of calcium chloride used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                              |
| Volume of grout prepared (gal.) Volume of grout used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                              |
| volume of grout used (gai.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                              |
| COMMENTS: Well abandoned previously?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | * Sketch in all relevant decommissioning data, including:    |
| Broken pad concrete at location , Bottords                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | interval overdrilled, interval grouted, casing left in hole, |
| as removed nev? Dug down and did not                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | well stickup, etc.                                           |
| linial well casing a Topped off hole with gra                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (T)                                                          |
| Land and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same |                                                              |

Becogic North Star Drilling Contractor

#### WELL DECOMMISSIONING RECORD Seneca Site Name: Well ID: Site Location: SEA D Driller: Drilling Company: Inspector: Date: 6/10 DECOMMISSIONING DATA WELL SCHEMATIC\* 10.0 (Fill in all that apply) Depth 1.4 (feet) OVERDRILLING Stick up TOP TO TA Interval Drilled Soil Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) 5 Depth temporary casing installed PULLED Casing type/dia. (in.) PUC Method of installing WELL CASING PULLING Method employed 10 Casing retrieved (feet) Casing type/dia. (in.) of CASE PERFORATING Well Equipment used 15 Number of perforations/foot Size of perforations Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) Cement type Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) Volume of grout used (gal.) 30 10 COMMENTS: Depth to water ft from TOC \* Sketch in all relevant decommissioning data, including: Knocked out end cap. Loade. interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

**Drilling Contractor** 



| WELL DECOMMISSIONING RECORD                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: Seneca Army Depot                                             | Well ID: MW 71-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Site Location: SEAD 71                                                   | Driller: Steve Laramee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Drilling Company: Geologic North Star                                    | Inspector: Scott Dillman                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 7                                                                        | Date: 9/24/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| DECOMMISSIONING DATA                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| (Fill in all that apply)                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1137                                                                     | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| OVERDRILLING                                                             | O Attached Top To TI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Interval Drilled                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Drilling Method(s)                                                       | 1-ilian                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Borehole Dia. (in.)                                                      | with t kirls Box                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Temporary Casing Installed? (y/n)                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Depth temporary casing installed                                         | 5 ANTED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Casing type/dia. (in.)                                                   | PNC - Grout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Method of installing                                                     | PUC Growt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CAODIO DIE I DIG                                                         | - WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CASING PULLING                                                           | Grosted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Method employed Grout, Poll, Growt                                       | I The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the |
| Casing retrieved (feet)                                                  | gis Bottom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Casing type/dia. (in.)                                                   | - / well                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| CASE PERFORATING                                                         | <u> </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Equipment used                                                           | 15 -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Number of perforations/foot                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Size of perforations                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Interval perforated                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CDOLUTING                                                                | 20 = //                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| GROUTING                                                                 | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Interval grouted (FBLS)                                                  | : '                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| # of batches prepared                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| For each batch record: Quantity of water used (gal.)                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Ountity of coment and 1(1)                                               | 1 3 = -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                          | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Type Turniana                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                          | Not                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Quantity of calcium chloride used (lbs.) Volume of grout prepared (gal.) | DRILLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Volume of annut word (and )                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| volume of grout used (gail.)                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| COMMENTS: Depth to water = ft from To                                    | C Asharina                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Knocked out end cap. Loaded casing with grout                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Pulled casing. Granted remaining borehole                                | interval overdrilled, interval grouted, casing left in hole, well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Added soil on top. Wouldn't pull well growter                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Geologic North Star in Mate.                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### Table 2-4 Well Decommissioning Record Well Abandonment Plan

Seneca Army Depot Activity

| WELL DECOMMISSIONING                     | RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | •                                           |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Site Name: Seneca Army 1                 | lepot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Well ID:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MW71-2                                      |
| Site Location: SEAD 7/                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Driller:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | steve Larance                               |
| Drilling Company: G-Cologic NorT         | th Star                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Scott Dillman                               |
| 7                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1/24/10                                     |
| DECOMMISSIONIN                           | G DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | WELL SCHEMATIC*                             |
| (Fill in all that ap                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                             |
| (2 th m an anat ap                       | 4.07                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | FLUSH MOUNT 6.6H                            |
| OVERDRILLING                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (100.1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No stick up 1 Top TO TO                     |
| Interval Drilled                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
| Drilling Method(s)                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 904 3011                                    |
| Borehole Dia. (in.)                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
| Temporary Casing Installed? (y/n)        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | _                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | - Grant                                     |
| Depth temporary casing installed         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | - Putter                                    |
| Casing type/dia. (in.)                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | JONE - Growt                                |
| Method of installing                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
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| CASING PULLING                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | would / of                                  |
| Method employed                          | Grout, Pull, Growt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | _10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NOT / Well                                  |
| Casing retrieved (feet)                  | 0.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Pyll                                        |
| Casing type/dia. (in.)                   | 2"PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | GROVED 4                                    |
| CASE PERFORATING                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - IN /                                      |
| Equipment used                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | PLACE (                                     |
| Number of perforations/foot              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | '                                           |
| Size of perforations                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
| Interval perforated                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
| GROUTING                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                             |
| Interval grouted (FBLS)                  | 0-6,69+                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
| # of batches prepared                    | 6,61                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - $1/1$ $1$                                 |
| For each batch record:                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
| Quantity of water used (gal.)            | 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
| Quantity of cement used (lbs.)           | 2-6ag5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                             |
| Cement type                              | Type Y Portland                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | · <b></b>    /                              |
| Quantity of bentonite used (lbs.)        | 10 pounds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Not                                         |
| Quantity of calcium chloride used (lbs.) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
| Volume of grout prepared (gal.)          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DRILLED                                     |
| Volume of grout used (gal.)              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                             |
| COLD GENERO. A                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | And the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t |                                             |
| COMMENTS: Depth to water                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | * Sketch in all re                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | elevant decommissioning data, including:    |
| Knocked out end cap. Loaded              | The same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the sa | interval overdrill                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | led, interval grouted, casing left in hole, |
|                                          | maining borehole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | •                                           |
| Added Soil Entop. Left ov                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
| Geologic North Star                      | Filled with grout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                             |

| WELL DECOMMISSIONING RECORD                                                                                                                                 |                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Site Name: SENECH ARMY NEPST                                                                                                                                | Well ID: MW71-3                                                                                                                          |
| Site Location: SEAN - 71                                                                                                                                    | Driller: David Light                                                                                                                     |
| Drilling Company: Geologic North Star                                                                                                                       | Inspector: Scatt Nilman                                                                                                                  |
|                                                                                                                                                             | Date: 1/25/2011                                                                                                                          |
| DECOMMISSIONING DATA                                                                                                                                        | WELL SCHEMATIC*                                                                                                                          |
| (Fill in all that apply)                                                                                                                                    | Depth 1.5 chck.                                                                                                                          |
| 7                                                                                                                                                           | Depth 1.5 stickup (feet) Removed Top To                                                                                                  |
| OVERDRILLING                                                                                                                                                | Removed TD                                                                                                                               |
| Interval Drilled                                                                                                                                            |                                                                                                                                          |
| Drilling Method(s)                                                                                                                                          | 7. 1.6                                                                                                                                   |
| Borehole Dia. (in.)                                                                                                                                         |                                                                                                                                          |
| Temporary Casing Installed? (y/n)                                                                                                                           | 5 -                                                                                                                                      |
| Depth temporary casing installed Casing type/dia. (in.)                                                                                                     | 5 = Laging Grow                                                                                                                          |
| Method of installing                                                                                                                                        |                                                                                                                                          |
| rection of installing                                                                                                                                       | Surger 6.1                                                                                                                               |
| CASING PULLING                                                                                                                                              | 10                                                                                                                                       |
| Method employed Knock, goot, pul, growt                                                                                                                     |                                                                                                                                          |
| Casing retrieved (feet)                                                                                                                                     |                                                                                                                                          |
| Casing type/dia. (in.)                                                                                                                                      |                                                                                                                                          |
| CASE PERFORATING                                                                                                                                            | <b>-</b> /                                                                                                                               |
| Equipment used                                                                                                                                              |                                                                                                                                          |
| Number of perforations/foot                                                                                                                                 |                                                                                                                                          |
| Size of perforations                                                                                                                                        |                                                                                                                                          |
| Interval perforated                                                                                                                                         | <u> </u>                                                                                                                                 |
| GROUTING                                                                                                                                                    |                                                                                                                                          |
| Interval grouted (FBLS)                                                                                                                                     | 1 Drilled                                                                                                                                |
| # of batches prepared                                                                                                                                       |                                                                                                                                          |
| For each batch record: Quantity of water used (gal.)                                                                                                        | / / I                                                                                                                                    |
|                                                                                                                                                             | - 1                                                                                                                                      |
| Quantity of cement used (lbs.)  Cement type  Zbans  Type   Part and                                                                                         |                                                                                                                                          |
| Quantity of bentonite used (lbs.)                                                                                                                           |                                                                                                                                          |
| Quantity of calcium chloride used (lbs.)                                                                                                                    |                                                                                                                                          |
| Volume of grout prepared (gal.)                                                                                                                             | _ //                                                                                                                                     |
| Volume of grout used (gal.)                                                                                                                                 |                                                                                                                                          |
| COMMENTS: Apth to water = 7.28 ft. fonto<br>Knocked mit end plug: Loaded casing with<br>grant. Pulled casing. Requered all. Topped<br>off grant to surface. | * Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |

Department Representative

| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| Site Name: Seneca Army Depot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| Site Location: SEAD 7/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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through screen, Department Representative
Howe water table Drilling Contractor

| WELL DECOMMISSIONING RECORD                                                                                                     |                                                                                                                                          |
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| Site Name: SENECA ARMY DEPO                                                                                                     | Well ID: MJ 119-1                                                                                                                        |
|                                                                                                                                 | Driller: David Lions                                                                                                                     |
| Site Location: 5EAD 119                                                                                                         | Inspector: Seatt Village                                                                                                                 |
| Drilling Company: Gsalogic North Star                                                                                           |                                                                                                                                          |
|                                                                                                                                 | Date: 1/27/2011                                                                                                                          |
| DECOMMISSIONING DATA (Fill in all that apply)  OVERDRILLING                                                                     | Depth (feet) Checker To The To                                                                                                           |
| Interval Drilled                                                                                                                | 21.5                                                                                                                                     |
| Drilling Method(s)                                                                                                              |                                                                                                                                          |
| Borehole Dia. (in.)                                                                                                             |                                                                                                                                          |
| Temporary Casing Installed? (y/n)                                                                                               |                                                                                                                                          |
| Depth temporary casing installed                                                                                                |                                                                                                                                          |
| Casing type/dia. (in.)                                                                                                          | Pulled Gran                                                                                                                              |
| Method of installing                                                                                                            |                                                                                                                                          |
| CASING PULLING                                                                                                                  |                                                                                                                                          |
| Method employed Knode, craft, poll on                                                                                           | went 10 This                                                                                                                             |
| Casing retrieved (feet)                                                                                                         | (asim)                                                                                                                                   |
| Casing type/dia. (in.)                                                                                                          |                                                                                                                                          |
| Casing type dia. (iii.)                                                                                                         |                                                                                                                                          |
| CASE PERFORATING                                                                                                                |                                                                                                                                          |
| Equipment used                                                                                                                  |                                                                                                                                          |
| Number of perforations/foot                                                                                                     | _                                                                                                                                        |
| Size of perforations                                                                                                            |                                                                                                                                          |
| Interval perforated                                                                                                             | _                                                                                                                                        |
| GROUTING                                                                                                                        | 20 = 19                                                                                                                                  |
| Interval grouted (FBLS)                                                                                                         | I+                                                                                                                                       |
| # of batches prepared                                                                                                           | <del></del>                                                                                                                              |
| For each batch record:                                                                                                          |                                                                                                                                          |
| Quantity of water used (gal.)                                                                                                   | Pot                                                                                                                                      |
| Quantity of cement used (lbs.)                                                                                                  | brilea 7                                                                                                                                 |
| Cement type                                                                                                                     | Mard                                                                                                                                     |
| Quantity of bentonite used (lbs.)                                                                                               | errors                                                                                                                                   |
| Quantity of calcium chloride used (lbs.)                                                                                        |                                                                                                                                          |
| Volume of grout prepared (gal.)                                                                                                 |                                                                                                                                          |
| Volume of grout used (gal.)                                                                                                     |                                                                                                                                          |
| COMMENTS: Death to water = 3.5 est for a located and and along coaled casing a growt. Pulled caking - Topped after sail on top. | * Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |
| Geologic Northstor                                                                                                              | Department Representative                                                                                                                |

| WELL DECOMMISSIONING RECORD                                                    |                                                                                                                                          |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                |                                                                                                                                          |
| Site Name: SENECH ARMY DEPOT                                                   | Well ID: MW 119-2                                                                                                                        |
| Site Location: SEAN - 119                                                      | Driller: David Libris                                                                                                                    |
| Drilling Company: Gedogic North star                                           | Inspector: Seatt Nillman                                                                                                                 |
| J                                                                              | Date: 1/27/2011                                                                                                                          |
| DECOMMISSIONING DATA                                                           | WELL SCHEMATIC*                                                                                                                          |
| (Fill in all that apply)                                                       | Depth 2.25 chickey                                                                                                                       |
| (I in in an diat apply)                                                        |                                                                                                                                          |
| OVERDRILLING                                                                   | D Removed ID                                                                                                                             |
| Interval Drilled                                                               |                                                                                                                                          |
| Drilling Method(s)                                                             | 2\$.25                                                                                                                                   |
| Borehole Dia. (in.)                                                            |                                                                                                                                          |
| Temporary Casing Installed? (y/n)                                              |                                                                                                                                          |
| Depth temporary casing installed                                               | 5 7 11 1/2 -                                                                                                                             |
| Casing type/dia. (in.)                                                         | - Grov                                                                                                                                   |
| Method of installing                                                           | - It                                                                                                                                     |
|                                                                                | 10 Pulled                                                                                                                                |
| CASING PULLING                                                                 | no police                                                                                                                                |
| Method employed ilmsek, grout, all grout                                       | 1 11/2                                                                                                                                   |
| Casing retrieved (feet)                                                        | - Puc                                                                                                                                    |
| Casing type/dia. (in.)                                                         | - casing                                                                                                                                 |
| CASE PERFORATING                                                               | 2"                                                                                                                                       |
| Equipment used                                                                 |                                                                                                                                          |
| Number of perforations/foot                                                    |                                                                                                                                          |
| Size of perforations                                                           |                                                                                                                                          |
| Interval perforated                                                            |                                                                                                                                          |
| GROUTING                                                                       | 20 - 19                                                                                                                                  |
| Interval grouted (FBLS)                                                        |                                                                                                                                          |
| # of batches prepared                                                          |                                                                                                                                          |
| For each batch record:                                                         |                                                                                                                                          |
| Quantity of water used (gal.)                                                  | Not                                                                                                                                      |
| Quantity of cement used (lbs.)                                                 | Drilled Drilled                                                                                                                          |
| Cement type Transler                                                           | DVII.                                                                                                                                    |
| Quantity of bentonite used (lbs.)                                              |                                                                                                                                          |
| Quantity of calcium chloride used (lbs.)                                       |                                                                                                                                          |
| Volume of grout prepared (gal.)                                                |                                                                                                                                          |
| Volume of grout used (gal.)                                                    |                                                                                                                                          |
| COMMENTS: Apth to water = 3.85 ft. fm Knocked out end plug. Loaded casing with | * Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |
| aff hale with frust                                                            |                                                                                                                                          |
| Geologic North Star Drilling Conductor                                         |                                                                                                                                          |
| Ziming Community                                                               | Department Representative                                                                                                                |

| WELL DECOMMISSIONING RECORD                                       |                                                              |
|-------------------------------------------------------------------|--------------------------------------------------------------|
| Site Name: SENECH ARMY NEPST                                      | Well ID: MW (19-3                                            |
|                                                                   | Driller: David Libns                                         |
| Site Location: SEAN - 119 Drilling Company: Gedogic North star    |                                                              |
| Drilling Company: Gedagic North Star                              |                                                              |
|                                                                   | Date: 1/26/2011                                              |
| DECOMMISSIONING DATA (Fill in all that apply)                     | Depth (feet) Removed TD                                      |
|                                                                   | (feet) De nated Top To                                       |
| OVERDRILLING                                                      |                                                              |
| Interval Drilled                                                  | 1 16.1                                                       |
| Drilling Method(s)                                                |                                                              |
| Borehole Dia. (in.)                                               |                                                              |
| Temporary Casing Installed? (y/n)                                 |                                                              |
| Depth temporary casing installed                                  | Grout                                                        |
| Casing type/dia. (in.)                                            |                                                              |
| Method of installing                                              |                                                              |
| CASING PULLING                                                    |                                                              |
|                                                                   | 10 = pulsed                                                  |
| Method employed  Casing retrieved (feet)  Casing retrieved (feet) | 10                                                           |
| Casing retrieved (rect)  Casing type/dia. (in.)                   |                                                              |
| Casing type dia. (iii.)                                           | = puc                                                        |
| CASE PERFORATING                                                  | 15 = posing                                                  |
| Equipment used                                                    | 15 700                                                       |
| Number of perforations/foot                                       | 14.154                                                       |
| Size of perforations                                              |                                                              |
| Interval perforated                                               |                                                              |
|                                                                   | 125                                                          |
| GROUTING                                                          | 20 = /                                                       |
| Interval grouted (FBLS) O-14.) f4                                 |                                                              |
| # of batches prepared                                             | - INST                                                       |
| For each batch record:                                            | 1 1 2001                                                     |
| Quantity of water used (gal.)                                     | - DATHE                                                      |
| Quantity of cement used (lbs.)                                    |                                                              |
| Cement type                                                       |                                                              |
| Quantity of bentonite used (lbs.)                                 |                                                              |
| Quantity of calcium chloride used (los.)                          |                                                              |
| Volume of grout prepared (gal.)                                   |                                                              |
| Volume of grout used (gal.)                                       |                                                              |
| COMMENTS: Apoth to water = 3.41. At. for                          | * Sketch in all relevant decommissioning data, including     |
| Knocked but end plua: Loaded casing with                          | interval overdrilled, interval grouted, casing left in hole, |
| grante Pulled against Recovered all casing                        | well stickup, etc.                                           |
| Tomes off grant?                                                  |                                                              |
| 01 11 11 11                                                       |                                                              |
| Geologic North Star                                               |                                                              |
| Drilling Contractor                                               | Department Representative                                    |

| WELL DECOMMISSIONING RECORD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                 |      |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------|--|--|
| Site Name: Seneca Army Depot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Well ID: MW/2/C-3                                                                                                                               |      |  |  |
| Site Location: SEAD 121 E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Driller: Scott Breeds                                                                                                                           |      |  |  |
| Drilling Company: Geologic North Star                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Inspector: Scott Dillman                                                                                                                        |      |  |  |
| J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Date: 9/23/10                                                                                                                                   |      |  |  |
| DECOMMISSIONING DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | WELL SCHEMATIC*                                                                                                                                 |      |  |  |
| (Fill in all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Depth / 3 /O.                                                                                                                                   | 10   |  |  |
| (                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (feet)                                                                                                                                          | 14   |  |  |
| OVERDRILLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | O SHOKUP TOP TO                                                                                                                                 | QT C |  |  |
| Interval Drilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4- 501                                                                                                                                          | Г    |  |  |
| Drilling Method(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                 |      |  |  |
| Borehole Dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                 |      |  |  |
| Temporary Casing Installed? (y/n)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                 |      |  |  |
| Depth temporary casing installed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5 POLLED                                                                                                                                        |      |  |  |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | PUC - Grou                                                                                                                                      | T    |  |  |
| Method of installing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | WELL ET                                                                                                                                         |      |  |  |
| CASING PULLING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                 |      |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10 - Batt                                                                                                                                       | Im   |  |  |
| Method employed Casing retrieved (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                 |      |  |  |
| Casing type/dia. (in.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | - We                                                                                                                                            | 11   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                 |      |  |  |
| CASE PERFORATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                 | 1    |  |  |
| Equipment used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 15                                                                                                                                              | l    |  |  |
| Number of perforations/foot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                 | - 1  |  |  |
| Size of perforations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                 | 1    |  |  |
| Interval perforated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                 | - 1  |  |  |
| CD OVERWAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20 -                                                                                                                                            |      |  |  |
| GROUTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                 |      |  |  |
| Interval grouted (FBLS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                 |      |  |  |
| # of batches prepared For each batch record:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                 | 1    |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                 | - 1  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 25 -                                                                                                                                            | 1    |  |  |
| The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |                                                                                                                                                 | 1    |  |  |
| Cement type  Quantity of bentonite used (lbs.)  Type I fortland                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Not                                                                                                                                             | .    |  |  |
| Quantity of calcium chloride used (lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                 |      |  |  |
| Volume of grout prepared (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DRILL                                                                                                                                           | EU   |  |  |
| Volume of grout used (gal.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 30                                                                                                                                              |      |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                 |      |  |  |
| COMMENTS: Depth to water = 7.90 ft from TOC<br>Knocked out end cap. Loaded casing with grout.<br>Pulled casing. Growted remaining borehole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | * Sketch in all relevant decommissioning data, including:<br>interval overdrilled, interval grouted, casing left in hole,<br>well stickup, etc. |      |  |  |
| Added soil on top.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                 | 1    |  |  |

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING                                   | RECORD             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •                                          |
|--------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Site Name: Seneca Army Depot                           |                    | Well ID:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MW 121C=4                                  |
| Site Name: Seneca Army Depot Site Location: SEAD 1214C |                    | Driller:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Le Menzel                                  |
|                                                        | h Stac             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Scott Dillman                              |
| Drilling Company: Geologic North Star                  |                    | Date: 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1 1                                        |
| DECOMMISSIONING                                        | CDATA              | Date. /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                            |
| (Fill in all that ap                                   |                    | Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | WELL SCHEMATIC*                            |
| (1 m m an anat ap                                      | PU)                | (feet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.4 /                                      |
| OVERDRILLING                                           |                    | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Stick up Top TO TD                         |
| Interval Drilled                                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4/50/1                                     |
| Drilling Method(s)                                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Concrete                                   |
| Borehole Dia. (in.)                                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Temporary Casing Installed? (y/n)                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Depth temporary casing installed                       |                    | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | - PULLED +                                 |
| Casing type/dia. (in.)                                 |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - PUC P Grout                              |
| Method of installing                                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - WELL CHT                                 |
| CASING PULLING                                         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Method employed                                        | Grout, Pull, Grait | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Bottone                                    |
| Casing retrieved (feet)                                | 9.64 Ft            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ·                                          |
| Casing type/dia. (in.)                                 | Z"PVC              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | J Well                                     |
|                                                        |                    | Life Calculation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -                                          |
| CASE PERFORATING                                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | —                                          |
| Equipment used                                         |                    | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |
| Number of perforations/foot                            |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| Size of perforations                                   |                    | Na principal de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la co |                                            |
| Interval perforated                                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| GROUTING                                               |                    | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | $\rightarrow$ $1/$ $1$                     |
| Interval grouted (FBLS)                                | 100                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| # of batches prepared                                  | 1-8,24             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| For each batch record:                                 | <u> </u>           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | $\rightarrow$ $\downarrow$ $\downarrow$    |
| Quantity of water used (gal.)                          | 18                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <u> </u>                                   |
| Quantity of cement used (lbs.)                         | 2-6a95             | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <del>-</del>    /                          |
| Cement type                                            | Type I Portland    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -                                          |
| Quantity of bentonite used (lbs.)                      | 10 pounds          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Not                                        |
| Quantity of calcium chloride used (lbs.)               |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DRILLED                                    |
| Volume of grout prepared (gal.)                        |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DALCCED                                    |
| Volume of grout used (gal.)                            | 8 gal              | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |
| COMMENTS: A                                            | 11.27/ 0:0         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| COMMENTS: Depth to water = 4.46 ft from TOC            |                    | * Sketch in all re                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | elevant decommissioning data, including:   |
| Knocked out end cap. Loaded casing with grout.         |                    | interval overdrill<br>well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ed, interval grouted, casing left in hole, |
| Added soil in top.                                     |                    | men snekup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                            |
| THE SUIT ON TOPA                                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |

Department Representative

Geologic North Star Drilling Contractor

| WELL DECOMMISSIONING RECORD                                 |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Site Name: Seneca Army Depot                                | Well ID: MW/2/2-5                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Site Location: SEAD ~ 121C                                  | Driller: Joe Menzel                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Drilling Company: Geologic North Star                       | Inspector: Scott Dillman                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| J                                                           | Date: 9/22/10                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| DECOMMISSIONING DATA                                        | WELL SCHEMATIC*                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| (Fill in all that apply)                                    | Depth 15 10 2                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
|                                                             | (feet)                                                                                                                    | - f4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| OVERDRILLING                                                | O stick up Top To                                                                                                         | Ą,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |
| Interval Drilled                                            | 4 Soils                                                                                                                   | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| Drilling Method(s)                                          | Course                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Borehole Dia. (in.)                                         |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Temporary Casing Installed? (y/n)                           |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Depth temporary casing installed                            | 5 PULLED                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Casing type/dia. (in.)                                      | PUC OF Grow                                                                                                               | r                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| Method of installing                                        | WELL ST                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| CASING PULLING                                              |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Method employed Grout, Poll, Grout                          | 10 - + Oeth                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Casing retrieved (feet)                                     | 1110                                                                                                                      | ۸.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |
| Casing type/dia. (in.)                                      | · / of                                                                                                                    | and the same                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
| - 140                                                       | - C well                                                                                                                  | - The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the |  |  |
| CASE PERFORATING                                            |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Equipment used                                              | 15 -  /                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Number of perforations/foot                                 |                                                                                                                           | diameter of the same                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| Size of perforations                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Interval perforated                                         |                                                                                                                           | The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s |  |  |
|                                                             | 20 7                                                                                                                      | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| <u>GROUTING</u>                                             | 20                                                                                                                        | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| Interval grouted (FBLS) $1 - 8.7 \mathcal{E}_{T}$           |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| # of batches prepared                                       |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| For each batch record:                                      |                                                                                                                           | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| Quantity of water used (gal.)                               |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Quantity of cement used (lbs.) 2-6aq5                       | 25                                                                                                                        | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| Cement type Type I furthend                                 |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Quantity of bentonite used (lbs.)                           | Not                                                                                                                       | No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |
| Quantity of calcium chloride used (lbs.)                    | - DRILLE                                                                                                                  | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| Volume of grout prepared (gal.) Volume of grout used (gal.) |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| volume of grout used (gai.)                                 | 30                                                                                                                        | <b>P</b> MARKAGENE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |
| COMMENTS: Depth to water = NA ft from TOC                   | 1                                                                                                                         | Special design                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
| Knocked out end cap. Loaded casing with grout.              | * Sketch in all relevant decommissioning data, including:<br>interval overdrilled, interval grouted, casing left in hole, | - Contraction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| Pylled casing. Growted remaining borehole.                  | well stickup, etc.                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Added soil on top.                                          | •                                                                                                                         | profession                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
|                                                             | <b></b>                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |

Geologic North Star

### WELL DECOMMISSIONING RECORD

| WEEL DECOMMISSIONING RECORD                                                               |             |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|-------------------------------------------------------------------------------------------|-------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Site Name: Seneca Army Depot                                                              |             | Well ID:                                | MW/Z/C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| Site Location: SEAD 1212                                                                  |             | Driller:                                | Joe Men-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Charles of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Contro |  |
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| Drilling Company: Geologic North Star                                                     |             | Inspector: Scott Dillman Date: 9/2/10   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| DECOMMISSIONING DATA                                                                      |             | Date.                                   | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | rick                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| (Fill in all that apply)                                                                  |             | Depth                                   | WELL SCHEMAT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 98                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| (Fill III all that apply)                                                                 |             | (feet)                                  | 1,2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | · Sty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| OVERDRILLING                                                                              |             | (1001)                                  | stick of Remove                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | TOP TO TO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| Interval Drilled                                                                          | <del></del> |                                         | 100,400,0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | a soil &                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Drilling Method(s)                                                                        |             |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Concrete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Borehole Dia. (in.)                                                                       |             |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 11 Process                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| Temporary Casing Installed? (y/n)                                                         |             | _                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Depth temporary casing installed                                                          |             | 5                                       | DIVLER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>S</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Casing type/dia. (in.)                                                                    |             | *************************************** | PULLER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Grout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| Method of installing                                                                      | ·           |                                         | WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 112                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                                                                                           |             |                                         | MELO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| CASING PULLING                                                                            |             | : 6                                     | ***************************************                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Botton                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| Method employed Grout, P.                                                                 | 1, Grost    | 10                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| Casing retrieved (feet) $9.8 P$                                                           | £           |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | / Well                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| Casing type/dia. (in.)                                                                    |             |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| CASE PERFORATING                                                                          |             |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Equipment used                                                                            | <del></del> | 15                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Number of perforations/foot                                                               |             |                                         | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
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                                                                                                                                             |                                                                                 |  |  |
| COMMENTS: Depth to water =                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | elevant decommissioning data, including:                                        |  |  |
| Rilled casing. Granted remaining borehole.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | well stickup, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | interval overdrilled, interval grouted, easing left in hole, well stickup, etc. |  |  |
| 1 1 1 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | coke off in hole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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                                                                                                                                             | 271                                                                             |  |  |

### Table 2-4

### Well Decommissioning Record Well Abandonment Plan

Seneca Army Depot Activity

| WELL DECOMMISSIONING RECORD                                                                                                                                       |                                                                                                                                           |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Site Name: Seneca Army Depot                                                                                                                                      | Well ID: MW 122B = 2                                                                                                                      |  |  |
| Site Location: SEAD 122B                                                                                                                                          | Driller: Steve Larance                                                                                                                    |  |  |
| Drilling Company: Geologic North Star                                                                                                                             | Inspector: Scatt Dillman                                                                                                                  |  |  |
| J                                                                                                                                                                 | Date: 9/24/10                                                                                                                             |  |  |
| DECOMMISSIONING DATA                                                                                                                                              | WELL SCHEMATIC*                                                                                                                           |  |  |
| (Fill in all that apply)                                                                                                                                          | Daniel O G CI                                                                                                                             |  |  |
| (2                                                                                                                                                                | (feet)                                                                                                                                    |  |  |
| OVERDRILLING                                                                                                                                                      | O stick up Top To T                                                                                                                       |  |  |
| Interval Drilled                                                                                                                                                  | Soil                                                                                                                                      |  |  |
| Drilling Method(s)                                                                                                                                                |                                                                                                                                           |  |  |
| Borehole Dia. (in.)                                                                                                                                               |                                                                                                                                           |  |  |
| Temporary Casing Installed? (y/n)                                                                                                                                 |                                                                                                                                           |  |  |
| Depth temporary casing installed                                                                                                                                  | 5 PULLED Grout                                                                                                                            |  |  |
| Casing type/dia. (in.)                                                                                                                                            | - PNC - Growt                                                                                                                             |  |  |
| Method of installing                                                                                                                                              | WELL HELL                                                                                                                                 |  |  |
| CASTNO DITTA DIC                                                                                                                                                  | WEO                                                                                                                                       |  |  |
| CASING PULLING                                                                                                                                                    |                                                                                                                                           |  |  |
| Method employed Grout, Pul, Grait                                                                                                                                 |                                                                                                                                           |  |  |
| Casing retrieved (feet)                                                                                                                                           |                                                                                                                                           |  |  |
| Casing type/dia. (in.)                                                                                                                                            |                                                                                                                                           |  |  |
| CASE PERFORATING                                                                                                                                                  |                                                                                                                                           |  |  |
| Equipment used                                                                                                                                                    | 15                                                                                                                                        |  |  |
| Number of perforations/foot                                                                                                                                       |                                                                                                                                           |  |  |
| Size of perforations                                                                                                                                              | 16                                                                                                                                        |  |  |
| Interval perforated                                                                                                                                               | - Botten                                                                                                                                  |  |  |
|                                                                                                                                                                   | - Of                                                                                                                                      |  |  |
| GROUTING                                                                                                                                                          | 20 -   Well                                                                                                                               |  |  |
| Interval grouted (FBLS)                                                                                                                                           |                                                                                                                                           |  |  |
| # of batches prepared                                                                                                                                             | - //                                                                                                                                      |  |  |
| For each batch record:                                                                                                                                            |                                                                                                                                           |  |  |
| Quantity of water used (gal.)                                                                                                                                     |                                                                                                                                           |  |  |
| Quantity of cement used (lbs.) 2-6aq5                                                                                                                             | 25                                                                                                                                        |  |  |
| Cement type Type Y Partland                                                                                                                                       |                                                                                                                                           |  |  |
| Quantity of bentonite used (lbs.)                                                                                                                                 | Not                                                                                                                                       |  |  |
| Quantity of calcium chloride used (lbs.)                                                                                                                          | DRILLE                                                                                                                                    |  |  |
| Volume of grout prepared (gal.)                                                                                                                                   |                                                                                                                                           |  |  |
| Volume of grout used (gal.)                                                                                                                                       | 30                                                                                                                                        |  |  |
| COMMENTS: Depth to water = 7.73 ft from TOC<br>Knocked out end cap. Loaded casing with grout.<br>Pulled casing. Grouted remaining borehole.<br>Added soil on top. | * Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc. |  |  |

Geologic North Star

Drilling Contractor

#### WELL DECOMMISSIONING RECORD Seneca Well ID: Site Name: Site Location: SEA D Driller: aramee Drilling Company: North Inspector: Date: **DECOMMISSIONING DATA WELL SCHEMATIC\*** (Fill in all that apply) Depth (feet) OVERDRILLING Interval Drilled Soil Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) PVC Method of installing WELL CASING PULLING Method employed 10 Casing retrieved (feet) Casing type/dia. (in.) CASE PERFORATING 15 Equipment used Batton Number of perforations/foot of Size of perforations Well Interval perforated 20 GROUTING Interval grouted (FBLS) # of batches prepared For each batch record: Quantity of water used (gal.) Quantity of cement used (lbs.) 25 Cement type upey Portle Quantity of bentonite used (lbs.) NOT Quantity of calcium chloride used (lbs.) DRILLED Volume of grout prepared (gal.) Volume of grout used (gal.) 30 COMMENTS: Depth to water At from TOC \* Sketch in all relevant decommissioning data, including: Knocked out end cap. Loaded with interval overdrilled, interval grouted, casing left in hole, well stickup, etc. remaining

Geologic North Star