

March 27, 2013

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: Final Well Decommissioning Report, Seneca Army Depot Activity, Romulus, 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 Government Services Inc. (Parsons) is pleased to submit the 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 Task 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

March 27, 2013

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: Final Well Decommissioning Report, Seneca Army Depot Activity, Romulus, New York; AFCEE Contract FA8903-04-D-8675, Task Order 31, CRDL-A001C

Dear Mr. Hill:

Parsons Government Services Inc. (Parsons) is pleased to submit the 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.

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: J. Chavez, AFCEE/EXA
S. Absolom, SEDA
K. Hoddinott, USACHPPM
R. Battaglia, USACE, NY
T. Battaglia, USACE, NY

March 27, 2013

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: 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 Government Services Inc. (Parsons) is pleased to submit the 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).

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. Powers, TechLaw
S. Absolom, SEDA
R. Battaglia, USACE, NY

J. Nohrstedt, USACE, Huntsville
K. Hoddinott, USACHPPM
T. Battaglia, USACE, NY

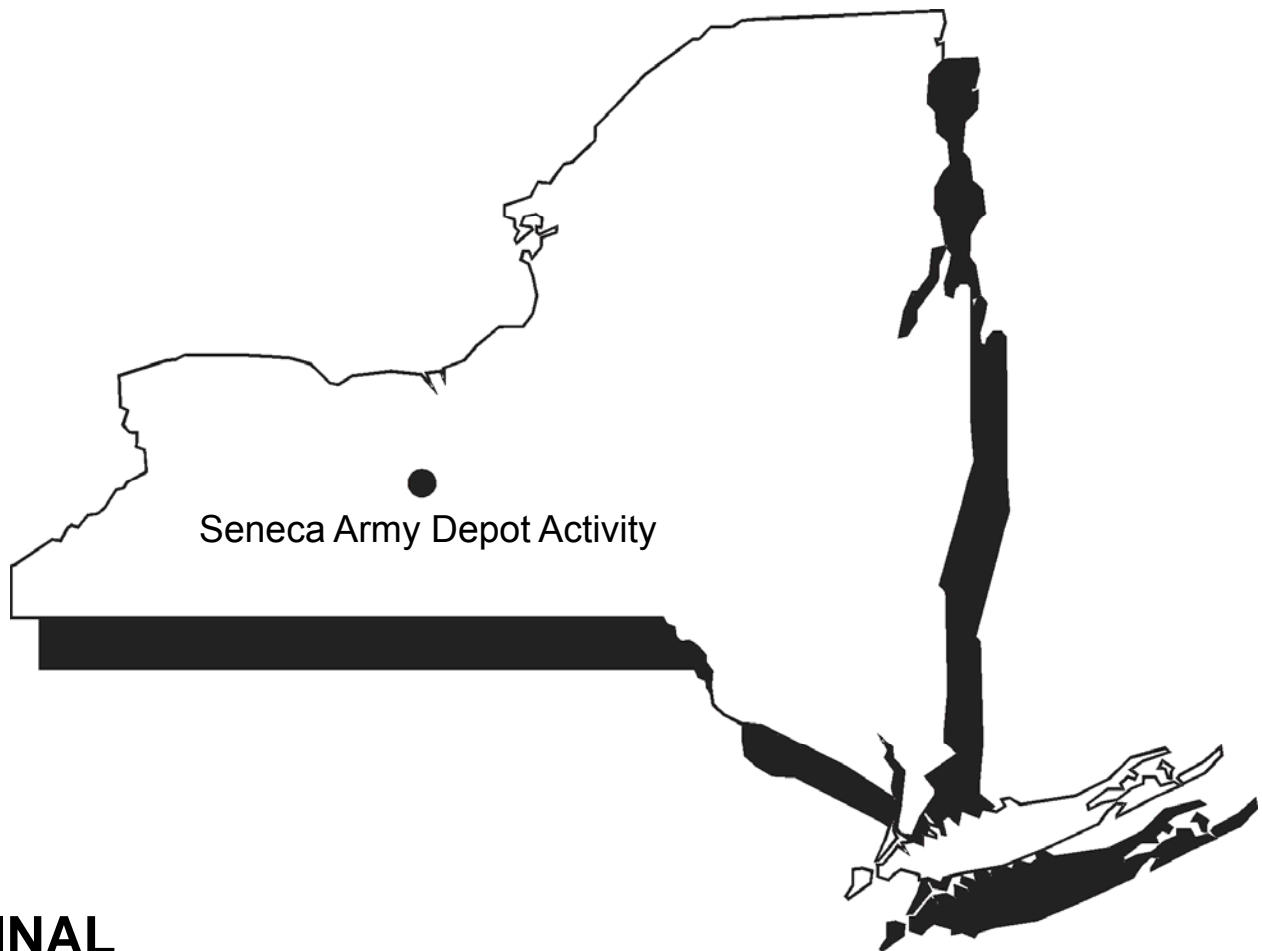


US Army, Engineering & Support Center
Huntsville, AL

01282



Seneca Army Depot Activity
Romulus, NY



FINAL

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

MARCH 2013

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

March 2013

TABLE OF CONTENTS

1.0 INTRODUCTION 1-1

2.0 AREA OF CONCERN DESCRIPTION AND STATUS 2-1

3.0 WELL DECOMMISSIONING 3-1

 3.1 PRELIMINARY INSPECTION RESULTS 3-1

 3.2 WELL DECOMMISSIONING ACTIVITIES 3-2

 3.3 WASTE GENERATION AND DISPOSAL 3-6

4.0 SUMMARY 4-1

5.0 REFERENCES 5-1

LIST OF TABLES

Table 1-1 Groundwater Wells Decommissioned

LIST OF 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
Figure 4 Wells Decommissioned, SEAD-5
Figure 5 Wells Decommissioned, SEAD-11
Figure 6a Wells Decommissioned, SEAD-12
Figure 6b Wells Decommissioned, SEAD-12
Figure 7 Wells Decommissioned, SEAD-13
Figure 8 Wells Decommissioned, SEAD-24
Figure 9 Wells Decommissioned, SEAD-25
Figure 10 Wells Decommissioned, SEAD-26
Figure 11 Wells Decommissioned, SEAD-27
Figure 12 Wells Decommissioned, SEAD-48
Figure 13 Wells Decommissioned, SEAD-59 and 71
Figure 14 Wells Decommissioned, SEAD-63
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

LIST OF APPENDICES

Appendix A Boring and Well Completion Logs
Appendix B Notice of Intent to Proceed
Appendix C Well Decommission Record

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 man-made 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 liquids¹ 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

¹ 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, 4th 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 7th 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, 4th 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 4th 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 a 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 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 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, 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. Although 'decommissioning by over-drilling' was originally listed as a possible decommissioning procedure, it was determined in the field that this method was not appropriate for the wells being decommissioned. 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-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 MW67-1 through 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.

Records documenting well construction details could not be located for wells in SEAD-59 (MW59-4 through MW59-8), and MW71-4 in SEAD-71 prior to the initiation of field activities. No evidence has been found to indicate that MW59-5 was ever installed. Well construction records for the last five wells (i.e., SEAD-59-4 and SEAD-59-6 through SEAD-59-8 and SEAD-71-4) were archived in off-site records storage facilities and could not be found. Information acknowledging this missing well completion information will be inserted into appropriate sections of the Well Decommissioning Report.

The lack of well installation and completion records for these wells, exclusive of MW59-5, did not hamper field efforts to decommission the wells. Based on Parsons' long-term knowledge of the Seneca site, the depth of the wells were each estimated at 15 feet as this represents the rough midpoint of the overburden horizon's thickness at all locations across the Depot. Upon accessing each of the wells in the field, physical characteristics of the installed well found, including casing type and diameter, the length of protective casing stickup, and the length of well riser and screen were measured and recorded on the Well Decommissioning Record, and then the work was performed. With reference to well MW59-5, survey coordinates are not recorded in the Army's database for this location and efforts to identify it at the presumed installation location were unsuccessful. Therefore, this well was not abandoned.

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

Parsons, 2004a: Final Findings Report – Small Arms Range, Lake Housing Area, Seneca Army Depot Activity, Romulus, New York, March 2004.

Parsons, 2004b: Final Record of Decision for the Fire Training and Demonstration Pad (SEAD-25) and the Fire Training Pit and Area (SEAD-26), Seneca Army Depot Activity, Romulus, New York, July 2004.

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.

Parsons, 2005a: Final Record of Decision for Ash Landfill, Seneca Army Depot Activity Romulus, New York, January 2005.

Parsons, 2005b: Final Remedial Design Work Plan and Design Report for SEAD-25 and SEAD-26, Seneca Army Depot Activity, Romulus, New York, November 2005.

Parsons, 2006a: Final Remedial Design Report for the Ash Landfill Operable Unit, Seneca Army Depot Activity, Romulus, New York, August 2006.

Parsons, 2006b: Final Record of Decision for Debris Area near Booster Station 2131 (SEAD-58) and Miscellaneous Components Burial Site (SEAD-63), Seneca Army Depot Activity, Romulus, New York, August 2006.

Parsons, 2006c: Final Supplemental Remedial Investigation Report, Radioactive Waste Burial Sites (SEAD-12), Seneca Army Depot Activity, October 2006.

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.

Parsons, 2008c: Final Remedial Design Work Plan and Design Report for the Munitions Washout Facility (SEAD-4) and the Building 2079 Boiler Blowdown Pit (SEAD-38), Seneca Army Depot Activity, Romulus, New York, October 2008.

Parsons, 2009a: Record of Decision for the Fill Area West of Building 135 (SEAD-59) and the Alleged Paint Disposal Area (SEAD-71), Seneca Army Depot Activity, Romulus, New York, March 2009.

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.

Parsons, 2009c: Final Record of Decision for Five Former SWMUs – SEADs 1, 2, 5, 24 and 48; Seneca Army Depot Activity; Contract DACA87-02-D-0005, Task Order 33, May 2009.

Parsons, 2009d: Final Record of Decision for the Old Construction Debris Landfill (SEAD-11) at Seneca Army Depot Activity, Romulus, New York, October 2009.

Parsons, 2010: 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, August 2010.

USACE, 1998: U.S. Department of the Defense, Base Realignment and Closure, Ordnance and Explosives Archives Search Report, Findings Seneca Army Depot, Romulus, Seneca County, New York. US Army Corps of Engineers, St. Louis District, December 1998.

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**

AOC Location	Well ID	Northing	Easting	Monitoring Well Type	Well Depth from Ground Surface (ft bgs)	Date Abandoned	Selected Decommissioning Method (1)	Casing Pulled	Bollards Removed	Number of Bollards	Top of Grout (ft bgs) (2)	Bottom of Grout (ft bgs)	Length of Grout (ft)	Quantity of Grout Used (gallons)	Field Geologist	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	
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	MW-35D	994450.265	739581.475	Bedrock	54	01/26/11	GIP		YES	3	0	56.3	56.3	NA	SD	Stickup removed, 6 inch casing in left in place, grouted all of 2 inch casing
SEAD-03 Ash Landfill	MW-36	994467.85	739577.77	Overburden/Bedrock	14.71	01/26/11	GPG	16.6	YES	3	0	15.8	15.8	NA	SD	
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	MW-45	995429.677	740320.317	Overburden	9	09/20/10	GPG	8.4			0	5.4	5.4	3	BMc	
SEAD-03 Ash Landfill	MW-47	995088.598	739188.829	Overburden/Bedrock	5.5	01/26/11	GPG	8.5	YES	3	0	6	6	NA	SD	
SEAD-03 Ash Landfill	MW-49D	995171.215	740321.557	Bedrock	35.5	09/20/10	GIP		YES	3	0	35	35	8	BMc	
SEAD-03 Ash Landfill	MW-50D	995165.986	740317.179	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	MW-55D	994820.83	739837.662	Bedrock	55.9	09/20/10	GIP		YES	3	0	55.8	55.8	50	BMc	
SEAD-03 Ash Landfill	MW-57D	994768.367	739436.205	Bedrock	33	01/26/11	GIP	1.9	YES	3	0	33.2	33.2	NA	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		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		15	09/20/10	GPG	20.4	YES	3	0	18.4	18.4	10	BMc	
SEAD-03 Ash Landfill	PT-23	995250.93	739850.04	Overburden/Bedrock	9.7	09/20/10	GPG	10.5	YES	3	1	7.7	6.7	7	SD	
SEAD-03 Ash Landfill	PT-25	994377.25	739840.14	Overburden/Bedrock	9.5	09/20/10	GPG	12.1			1	9.3	8.3	8	SD	
SEAD-4	MW4-1	999187.45	733603.32	Overburden	10.5	09/17/10	GPG	12.9			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											Decommissioned 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	
SEAD-4	MW4-6	987261.57	744333.8	Overburden	9.9											Decommissioned during SEAD-4 Remedial Action
SEAD-4	MW4-7	987525.87	744761.6	Overburden	6.4	09/17/10	GPG	8.5			1	6.4	5.4	6	SD	
SEAD-4	MW4-8	986990.62	744352.19	Overburden	10											Decommissioned 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	
SEAD-4	MW4-10	986620.39	745454.9	Overburden	8.1											Decommissioned 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			1	6.4	5.4	6	SD	
SEAD-5	MW5-1	998728.88	750506.5	Overburden	11.9				YES	3						Decommissioned during SEAD-5 Remedial Action
SEAD-5	MW5-2	998755.38	750226.06	Overburden	10	09/24/10	GPG	12	YES	3	1	9.4	8.4	9	SD	
SEAD-5	MW5-3	998884.31	750255.94	Overburden	8.5				YES	3						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	
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	MW11-6	987550.5	743444.4	Overburden	8.5	09/21/10	GPG	10.35			1	8	7	7	SD	
SEAD-11	MW11-7	987462.8	743485.7	Overburden	6	09/21/10	GPG	7.6			1	5.4	4.4	5	SD	
SEAD-12	MW12-01	1015591.7	745456.8	Overburden	9	09/15/10	GPG	11.4	YES	3	1	9	8	9	SD	
SEAD-12	MW12-02	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		11.8	01/25/11	GPG	11.6	YES	3	0	11.6	11.6	NA	SD	
SEAD-12	MW12-07	1015394.579	744855.8807	Overburden	13.6				YES	3						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**

AOC Location	Well ID	Northing	Easting	Monitoring Well Type	Well Depth from Ground Surface (ft bgs)	Date Abandoned	Selected Decommissioning Method (1)	Casing Pulled	Bollards Removed	Number of Bollards	Top of Grout (ft bgs) (2)	Bottom of Grout (ft bgs)	Length of Grout (ft)	Quantity of Grout Used (gallons)	Field Geologist	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	
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	MW12-11	1015123.089	744975.8444	Overburden/Bedrock	13.1				YES	3						Removed during SEAD-12 Removal Action at Radiological Disposal Pits
SEAD-12	MW12-12	1015162.954	744888.0145	Overburden/Bedrock	13				YES	3						Removed during SEAD-12 Removal Action at Radiological Disposal Pits
SEAD-12	MW12-13	1015212.377	744875.6862	Overburden/Bedrock	13				YES	3						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	12.7	YES	3	1	11.1	10.1	11	SD	
SEAD-12	MW12-25	1012127.712	742084.164	Overburden	10.3	09/15/10	GPG	13.7	YES	3	1	10.8	9.8	11	SD	
SEAD-12	MW12-26	1012155.909	742161.7122	Overburden	10.1	09/15/10	GPG	13.5	YES	3	1	11	10	11	SD	
SEAD-12	MW12-27	1012826.292	743875.0482	Overburden	10	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	3	1	10.4	9.4	10	SD	
SEAD-12	MW12A-02	1015117.1	744926.75	Overburden	12	09/14/10	GPG	13	YES	3	1	12	11	NA	SD	
SEAD-12	MW12A-03	1015521.4	744532.25	Overburden	15.1	09/14/10	GPG	16.4	YES	3	1	14.9	13.9	NA	SD	
SEAD-12	MW12B-01	1015934.4	743739.69	Overburden	17.8	09/13/10	GPG	19.2	YES	3	1	18	17	18	SD	
SEAD-12	MW12B-02	1015920.1	743522.88	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	
SEAD-13	MW13-8															Well could not be found
SEAD-13	MW13-9	998663.96	750366.52			09/15/10	GPG	16.2			1	14.8	13.8	15	SD	
SEAD-13	MW13-10	998964.4333	750023.7785	Overburden	15.0	09/15/10	GPG	16.2			1	14.2	13.2	14	SD	
SEAD-13	MW13-11	998857.0719	750060.1322	Overburden	15.0	09/15/10	GPG	16.6			1	14.8	13.8	15	SD	
SEAD-13	MW13-12	999298	750894.75	Overburden	11.3	09/16/10	GPG	10.9			1	9.9	8.9	9	SD	
SEAD-13	MW13-13	999309.5	750986.44	overburden	15.0											Well could not be found
SEAD-13	MW13-14	999298	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						Decommissioned 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	0	25	25	25	BMc	

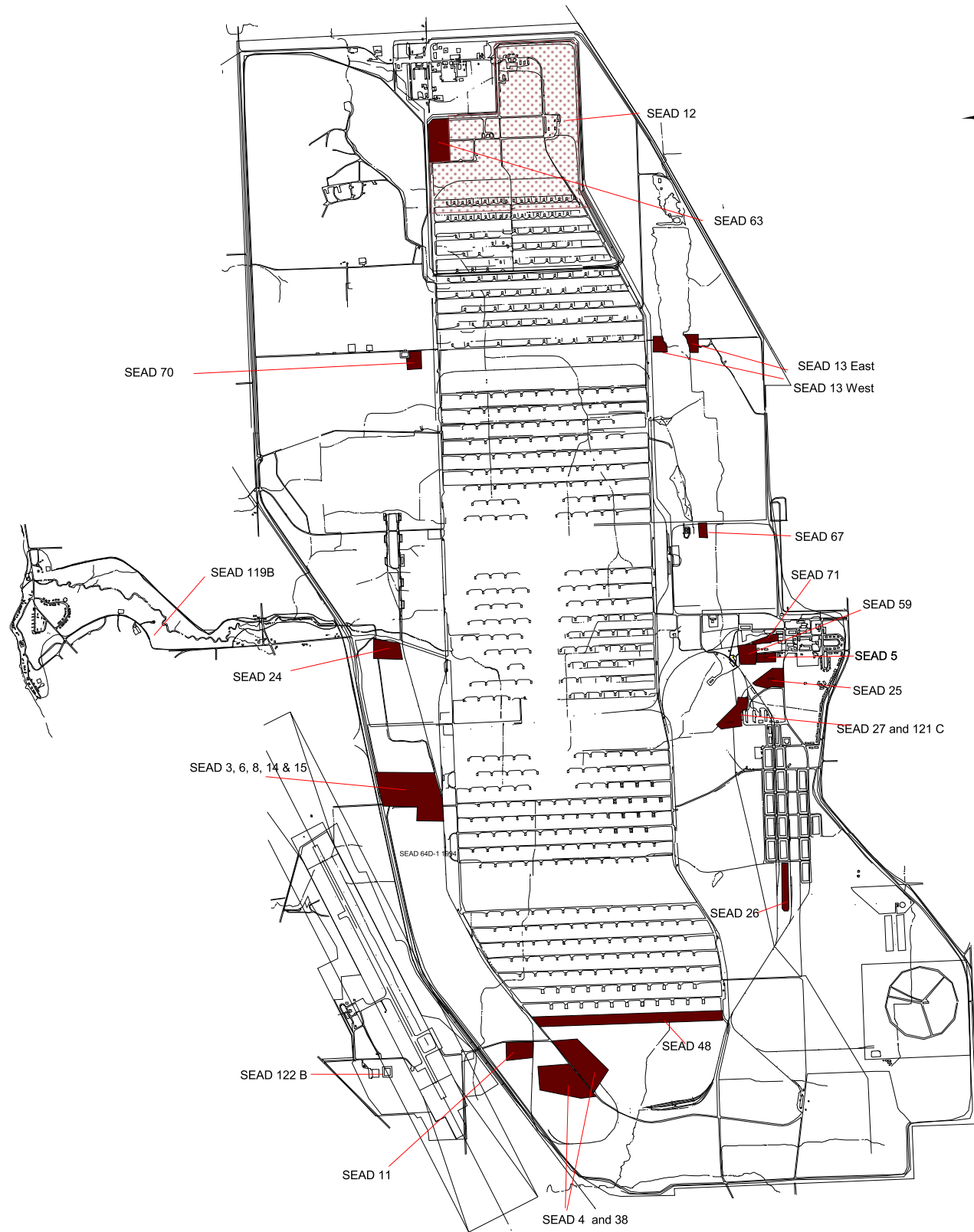
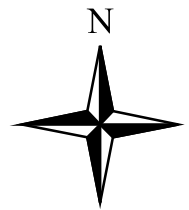
**Table 1-1
Groundwater Wells Decommissioned
Seneca Army Depot Activity**

AOC Location	Well ID	Northing	Easting	Monitoring Well Type	Well Depth from Ground Surface (ft bgs)	Date Abandoned	Selected Decommissioning Method (1)	Casing Pulled	Bollards Removed	Number of Bollards	Top of Grout (ft bgs) (2)	Bottom of Grout (ft bgs)	Length of Grout (ft)	Quantity of Grout Used (gallons)	Field 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	
SEAD-26	MW26-09	991724.1357	751224.9496	Overburden/Bedrock	12.2				YES	3						Decommissioned during SEAD-26 Remedial Action
SEAD-26	MW26-10	991653.8949	751205.9184	Overburden/Bedrock	12	09/23/10	GPG	13.5	YES	3	1	12	11	12	SD	
SEAD-26	MW26-11	992691.2201	751235.2629	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		15	09/24/10	GPG	17.2			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)	744685 (approx)	Overburden	7.6	09/23/10	GPG	10			1	8	7	8	SD	
SEAD-48	MW48-3	988680 (approx)	746770 (approx)	Overburden	8	09/21/10	GPG	10			1	7.3	6.3	7	SD	
SEAD-48	MW48-4	988695 (approx)	747355 (approx)	Overburden	8	09/21/10	GPG	11	YES	3	0.2	7.3	7.1	NA	BMc	
SEAD-48	MW48-5	988725 (approx)	748030 (approx)	Overburden	13	09/21/10	GPG	15	YES	3	0.5	13	12.5	NA	BMc	
SEAD-48	MW48-6	988750 (approx)	748850 (approx)	Overburden	8	09/21/10	GPG	11	YES	3	0	8	7.8	NA	BMc	
SEAD-48	MW48-7	989365 (approx)	747045 (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	988020 (approx)	747695 (approx)	Overburden	6	09/22/10	GPG	8			1	6	5	5	SD	
SEAD-59	MW59-1	998909.81	749948.88	Overburden	9.2	01/25/11	GPG	9.3	YES	3	0	7.3	7.3	NA	SD	
SEAD-59	MW59-2	999035.94	749874.13	Overburden	11.4	09/24/10	GPG	13.2	YES	3	1	13.2	12.2	12	SD	
SEAD-59	MW59-3	999029.5	750345.88	Overburden	8.8				YES	3						Removed during SEAD-59 Time-Critical Removal Action
SEAD-59	MW59-4	998815.27	749980.43		15	09/23/10	GPG	8.6	YES	3	1	7.1	6.1	8	SD	
SEAD-59	MW59-5				15				YES	3						No Record could be found.
SEAD-59	MW59-6	998663.96	750366.52		15				YES	3						Decommissioned 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	MW67-2	1002256.7	748953.25	Overburden	11.8	09/16/10	GPG	12.9	YES	3	1	12	11	12	SD	
SEAD-67	MW67-3	1002492.1	748794.94	Overburden	11.3	09/16/10	GPG	13	YES	3	1	11.5	10.5	12	SD	
SEAD-70	MW70-1	1007329.9	740889.13	Overburden	10.4	09/16/10	GPG	11.8	YES	3	1	10.5	9.5	11	SD	
SEAD-70	MW70-2	1007329.7	740555.63	Overburden	11.6				YES	3						Well could not be located.
SEAD-70	MW70-3	1007173.3	740552.25	Overburden	9.4	09/16/10			YES	3	0	4	4			Broken pad found; dug down 4 feet no well encountered, Backgrouted 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	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			0	14.1	14.1	NA	SD	
SEAD-121C	MW121C-3	997507.91	749999.17	Overburden	15	09/23/10	GPG	10.1			1	9.1	8.1	9	SD	
SEAD-121C	MW121C-4	996866.95	749922.29	Overburden	15	09/22/10	GPG	9.64			1	8.2	7.2	8	SD	
SEAD-121C	MW121C-5	996896.87	749448.53	Overburden	15	09/22/10	GPG	10.2			1	8.7	7.7	9	SD	
SEAD-121C	MW121C-6	997040.99	749613.64	Overburden	15	09/22/10	GPG	9.8			1	9.8	8.8	9	SD	
SEAD-122B	MW-1	986840.19	739802.9	Overburden	16.5	09/24/10	GPG/GIP	10			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	

Notes:
1 - GIP = Grout in Place. GPG = Grout, pull, grout. GPG/GIP = Grout, pull, a portion of well broke off during pull and was left in hole, grouted in place.
2 - ft
NA = Not available.

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
Figure 4	Wells Decommissioned, SEAD-5
Figure 5	Wells Decommissioned, SEAD-11
Figure 6a	Wells Decommissioned, SEAD-12
Figure 6b	Wells Decommissioned, SEAD-12
Figure 7	Wells Decommissioned, SEAD-13
Figure 8	Wells Decommissioned, SEAD-24
Figure 9	Wells Decommissioned, SEAD-25
Figure 10	Wells Decommissioned, SEAD-26
Figure 11	Wells Decommissioned, SEAD-27
Figure 12	Wells Decommissioned, SEAD-48
Figure 13	Wells Decommissioned, SEAD-59 and 71
Figure 14	Wells Decommissioned, SEAD-63
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



LEGEND



Location of SEAD-12 where wells were decommissioned.



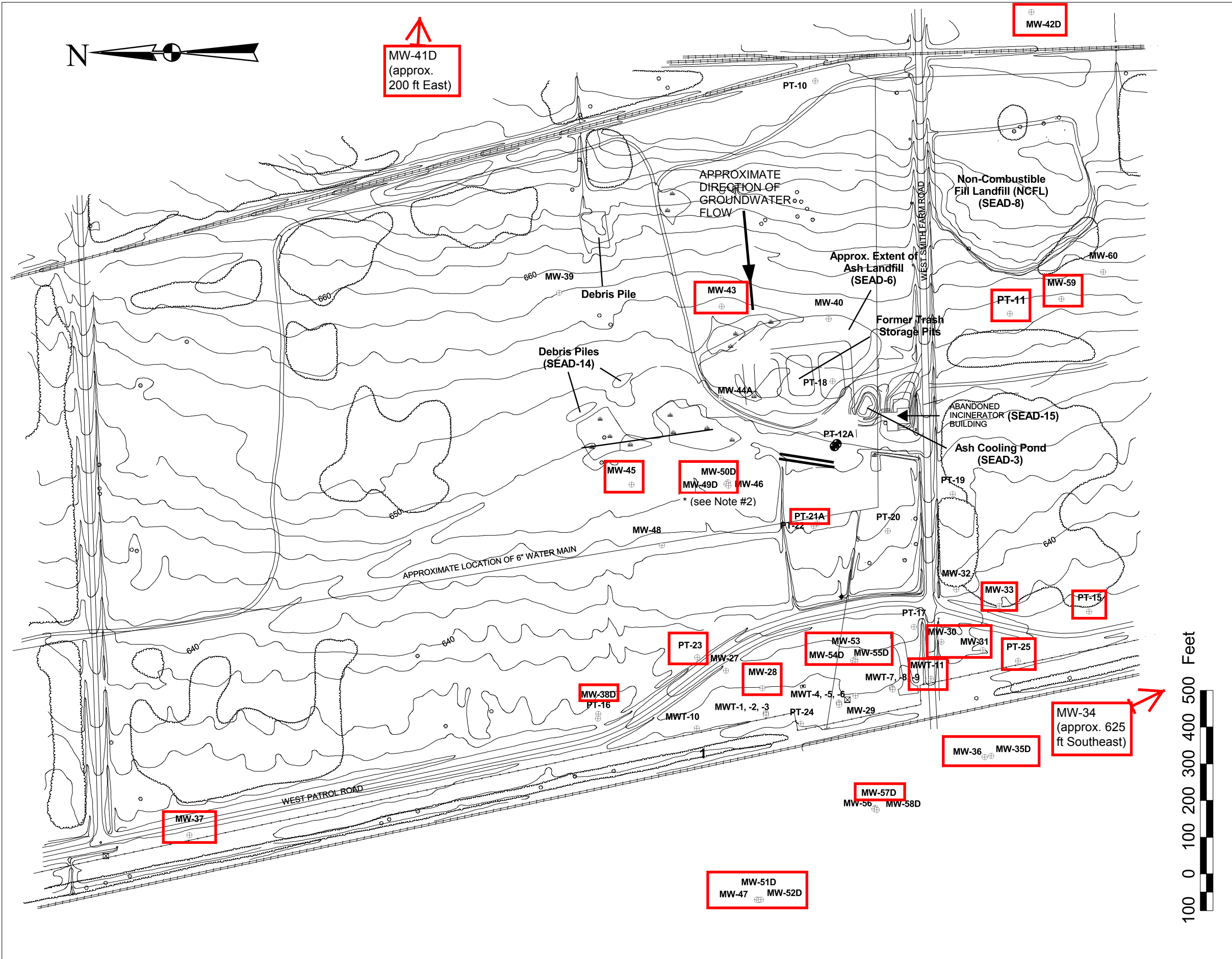
Locations where monitoring wells were decommissioned.



PARSONS

SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report

FIGURE 1
Location of SWMUs



LEGEND

- PAVED ROAD
- GROUND CONTOUR AND ELEVATION
- WETLAND & DESIGNATION
- OUTLINE OF FORMER TRASH PITS (IDENTIFIED FROM AERIAL PHOTO)
- APPROXIMATE EXTENT OF DEBRIS PILE
- BRUSH
- CHAIN LINK FENCE
- UTILITY POLE
- APPROXIMATE LOCATION OF FIRE HYDRANT
- PT-22 MONITORING WELL AND DESIGNATION
- MW-37 RAILROAD
- 6" WATER MAIN
- - - - - APPROX EXTENT OF IRM SOIL TREATMENT
- 1,000 GROUNDWATER ISOCONTOUR (ug/L)
- 75 TOTAL CHLORINATED ETHENES (ug/L) FROM SAMPLES COLLECTED IN JANUARY 2000
- 10U NO CHLORINATED ETHENES DETECTED

NOTE:
THE CONCENTRATIONS SHOWN ON THIS FIGURE ARE FOR WELLS SCREENED IN THE TILLED/WEATHERED SHALE AQUIFER.

Note #2 : MW-46 was not decommissioned.

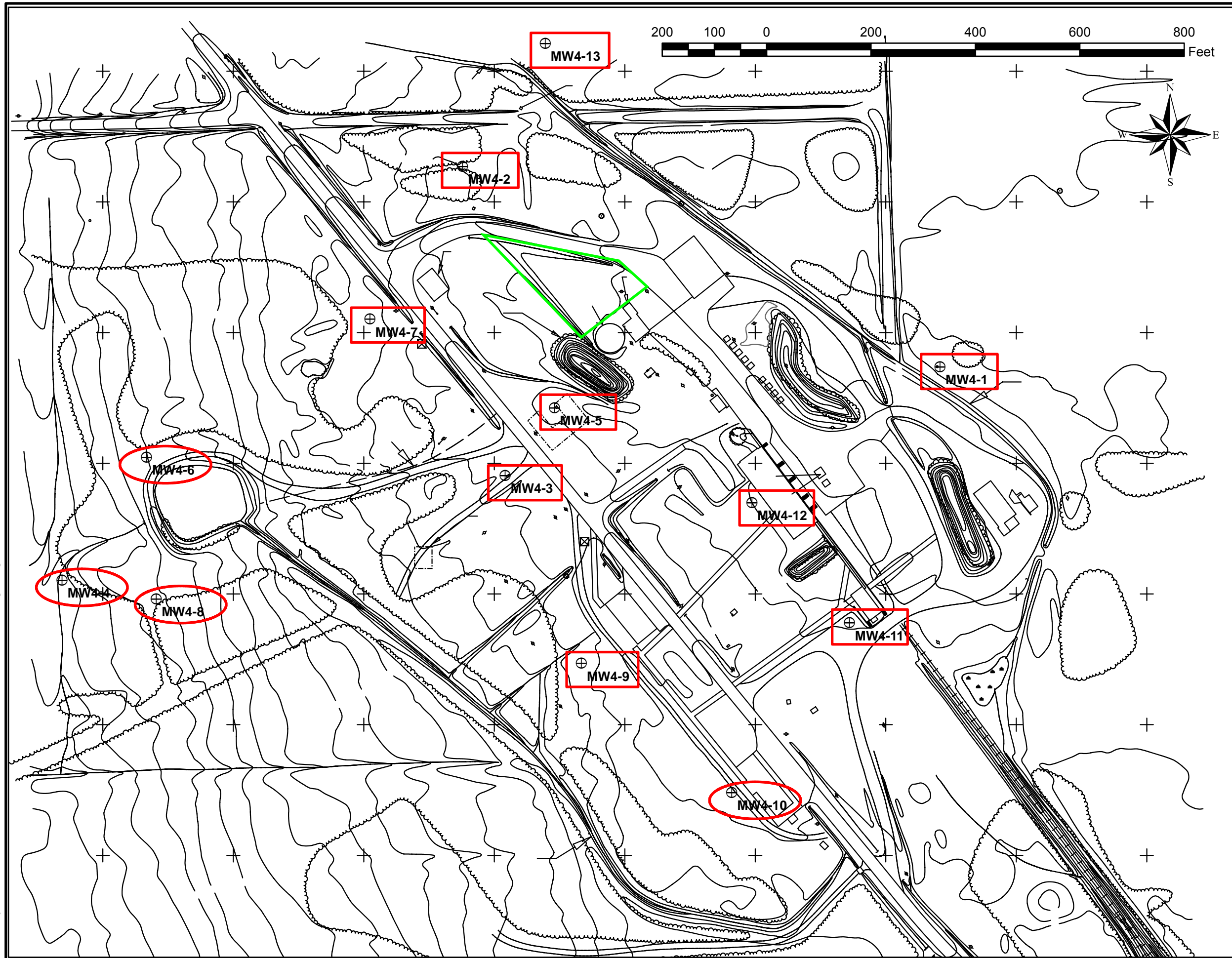
Well decommissioned between Sept 2010 and Jan 2011.



PARSONS

SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report

Figure 2
Wells Decommissioned
Ash Landfill Operable Unit



Legend:

- ⊕ Monitoring Well
- Well decommissioned in Sept 2010.
- Well decommissioned previously.
- ▭ Approximate Boundary of SEAD-38.

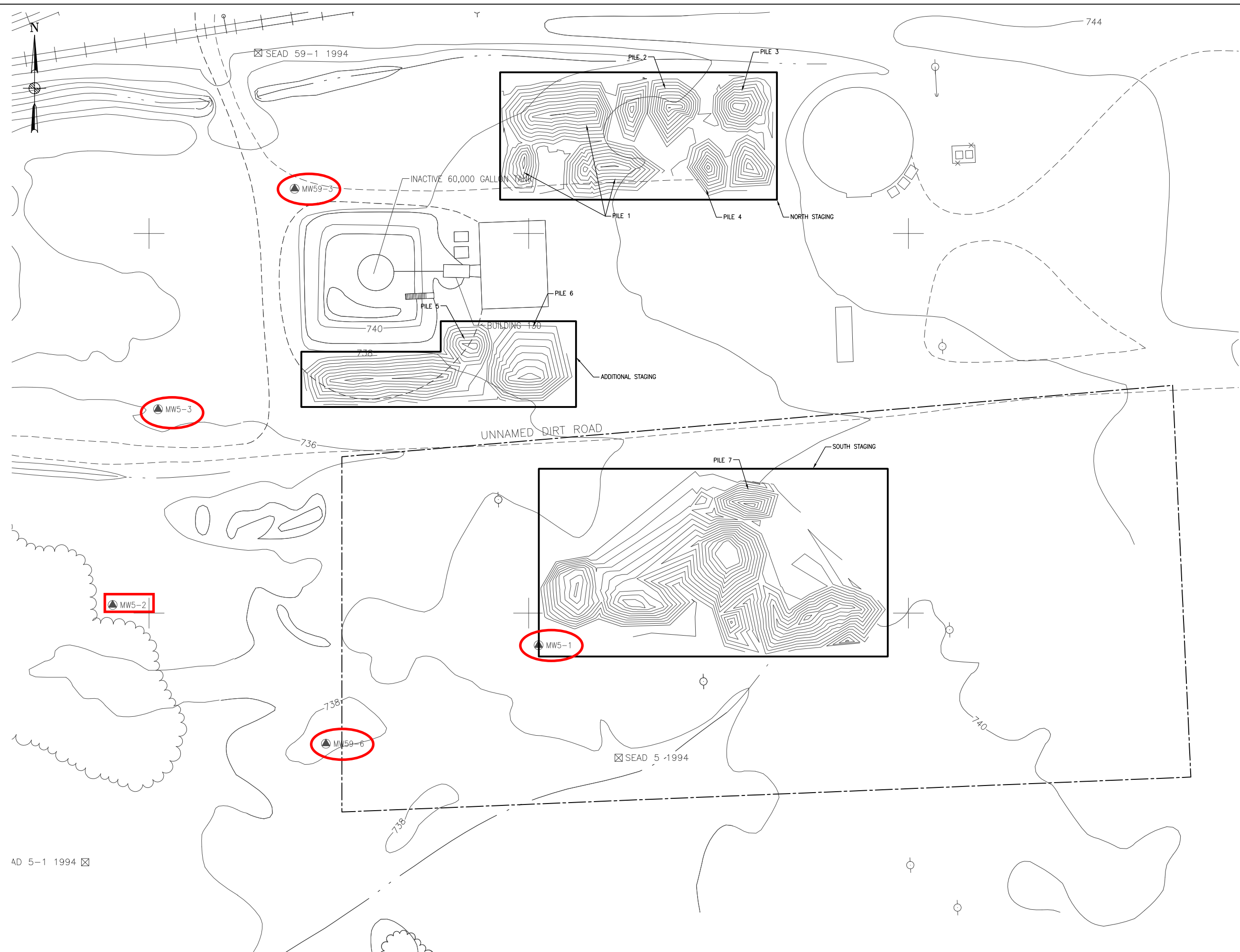


PARSONS

SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report

Figure 3
Wells Decommissioned
SEAD-4 & SEAD-38

FEBRUARY 2011



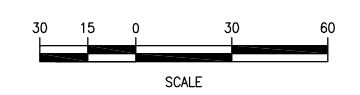
LEGEND

	MINOR WATERWAY
	MAJOR WATERWAY
	FENCE
	UNPAVED ROAD
	BRUSH LINE
	RAILROAD
	ROAD SIGN
	DECIDUOUS TREE
	GUIDE POST
	FIRE HYDRANT
	MANHOLE
	MAILBOX/RR SIGNAL
	POLE
	UTILITY BOX
	OVERHEAD UTILITY POLE
	SURVEY MARKER
	MW5-1 GROUNDWATER MONITORING WELL
	EXISTING MAJOR ELEVATION CONTOUR
	EXISTING MINOR ELEVATION CONTOUR
	SEAD-5 BOUNDARY

- NOTES:**
1. LOCATIONS OF SOIL STOCKPILES EXCAVATED FROM SEAD-59 AND SEAD-71 ARE BASED ON PRE-CONSTRUCTION GPS SURVEY.
 2. BOUNDARY OF SEAD-5 IS BASED ON THE FORMER SEWER SLUDGE WASTE PILES LAND PARCEL BOUNDARY.

Well decommissioned between Sept 2010 and Jan 2011.

Well decommissioned previously.



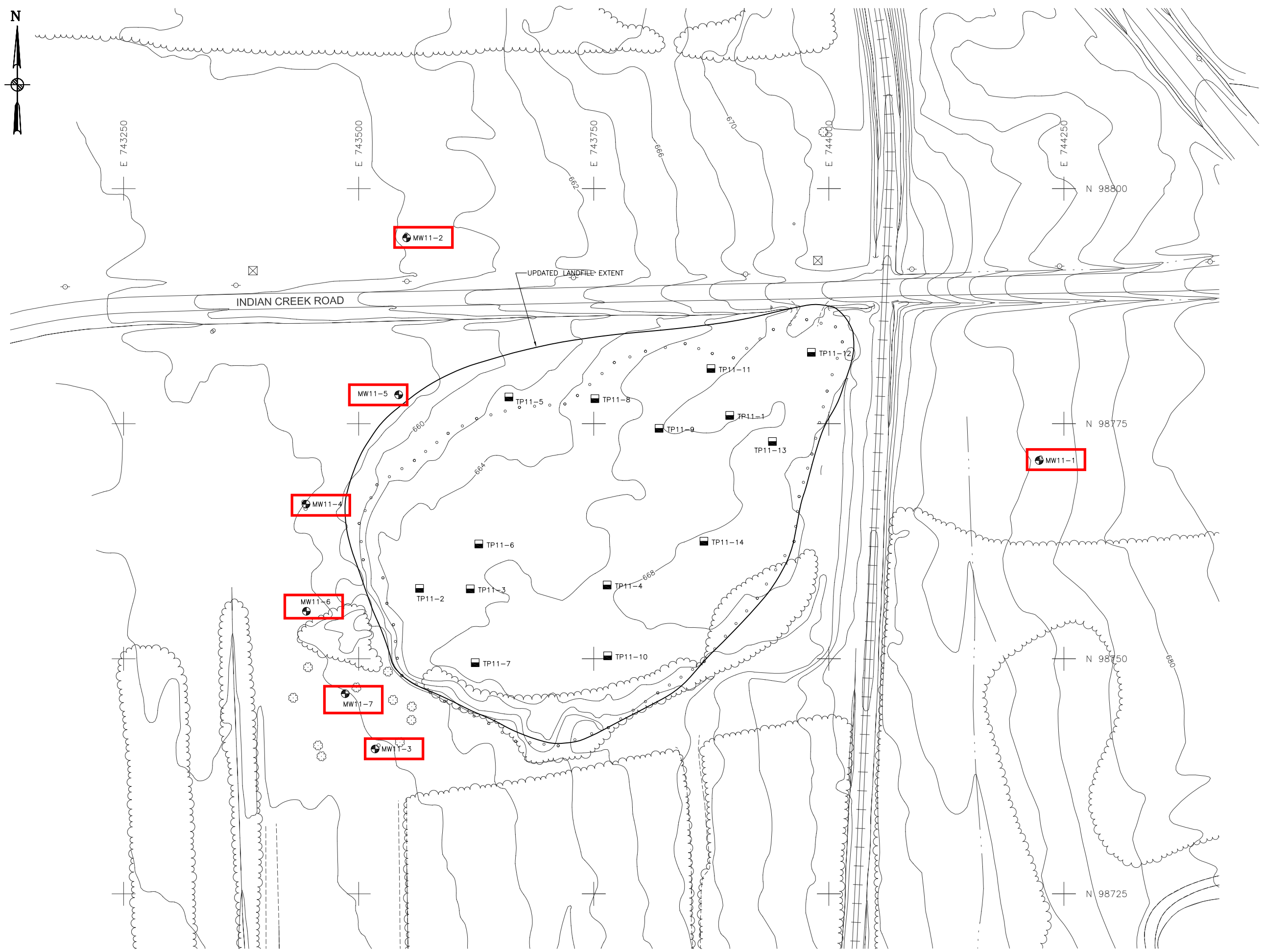
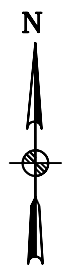
PARSONS
100 HIGH STREET, 4TH FLOOR - BOSTON, MA 02110-1713

CLIENT/PROJECT TITLE:
**SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report**

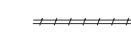
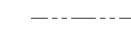
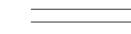
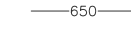



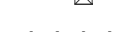

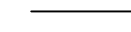



**Figure 4
Wells Decommissioned
SEAD-5**

AD 5-1 1994 ☒

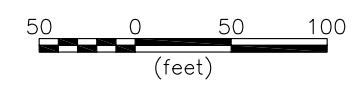
SCALE: AS SHOWN	DRWN: RR	CHKD: BBO	APPD: JA	DATE: 12/02/09	REV: -
--------------------	-------------	--------------	-------------	-------------------	-----------



LEGEND:

-  RAILROAD TRACKS
-  PROPERTY LINE
-  ROAD
-  CONTOUR ELEVATION
-  TREELINE
-  FENCE
-  UTILITY POLE
-  SURVEY MONUMENT
-  PREVIOUS DELINEATION OF LANDFILL EXTENT
-  UPDATED LANDFILL EXTENT
-  DECIDUOUS TREE
-  MW11-6 MONITORING WELL
-  TP11-2 HISTORIC TEST PIT LOCATION

 Well decommissioned between Sept 2010 and Jan 2011.

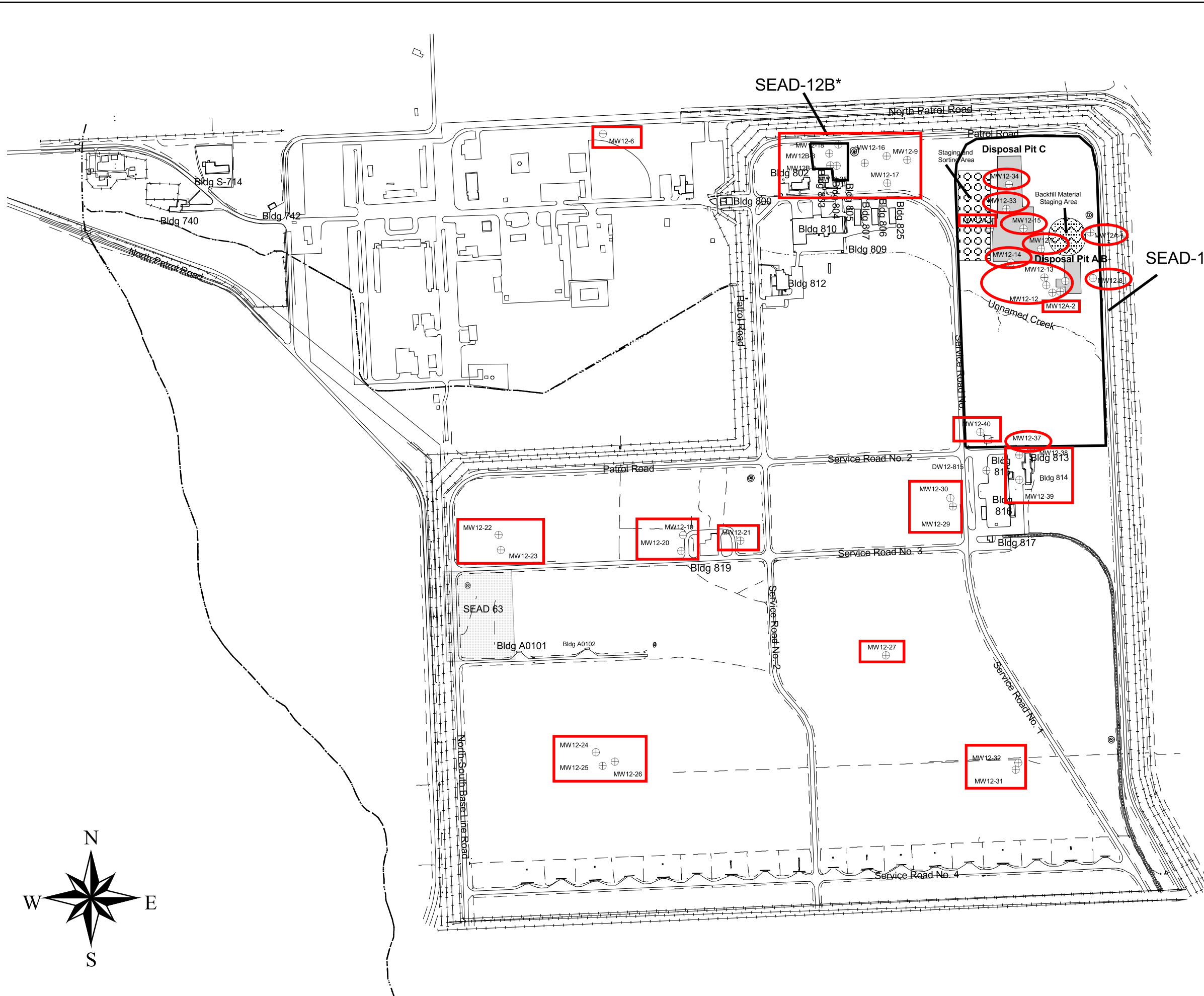


CLIENT/PROJECT TITLE
SENECA ARMY DEPOT
 Well Decommissioning Report

DEPT. ENVIRONMENTAL ENGINEERING Dwg. No. 734543-01000

Figure 5
Wells Decommissioned
SEAD-11

SCALE 1" = 100' DATE JULY 2006 REV -



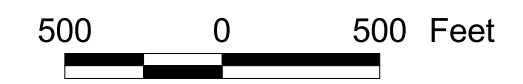
LEGEND

- ⊕ MW12-15 MONITORING WELL LOCATION
- DISPOSAL PIT AREA
- SEAD-63
- BUILDINGS (bldgs)
- BACKFILL MATERIAL STAGING AREA
- STAGING AND SORTING AREA
- FENCE
- ROADS
- SURFACE WATER

Wells decommissioned between Sept 2010 and Jan 2011.

Note:
 * The SEAD-12 site boundary was expanded from the original site boundary which only consisted of two separate areas, known as SEAD-12A and SEAD-12B.

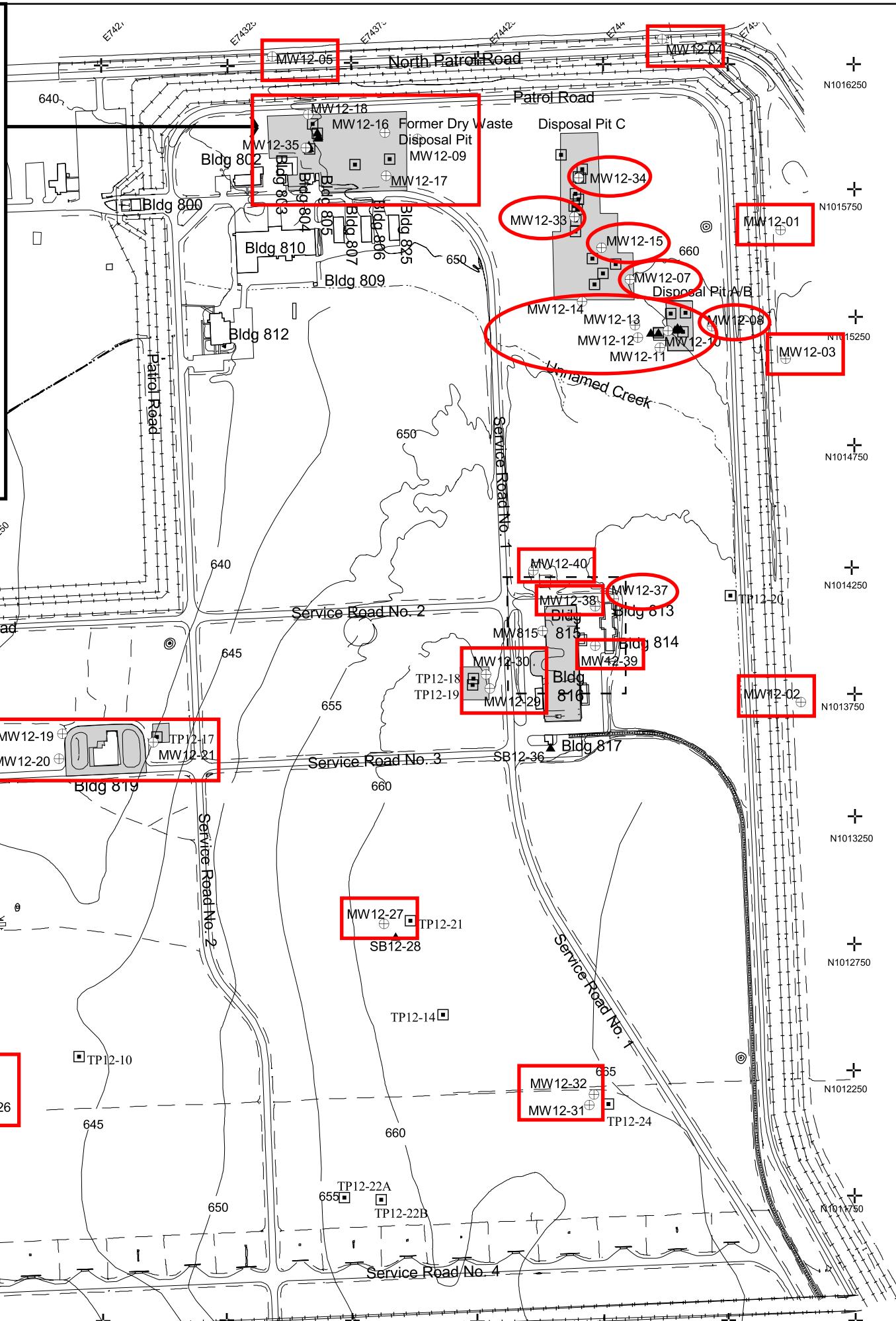
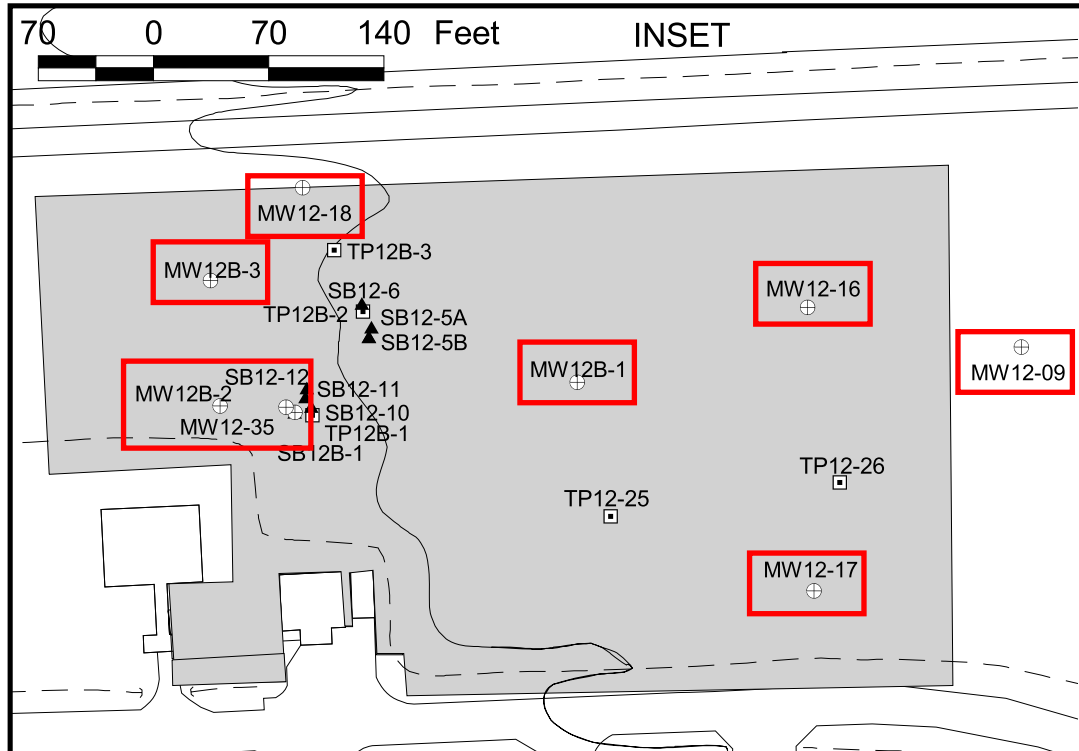
Wells decommissioned previously.



PARSONS

SENECA ARMY DEPOT ACTIVITY
 Well Decommissioning Report

Figure 6a
 Wells Decommissioned SEAD-12



LEGEND

- TP12-20
TESTPIT LOCATION
- ▲ SB12-10
SOIL BORING LOCATION
- ⊕ MW12-15
MONITORING WELL
LOCATION
- POTENTIAL RELEASE
AREA
- - - SEE FIGURE 1-8 FOR SRI
SAMPLE LOCATIONS FROM
TEST PIT AND STOCKPILE

NOTE: DISPOSAL PIT A/B AND C
SAMPLING LOCATIONS ARE PROVIDED
FIGURES 2-2 THROUGH 2-5

- Wells decommissioned between
Sept 2010 and Jan 2011.
- Wells decommissioned
previously.



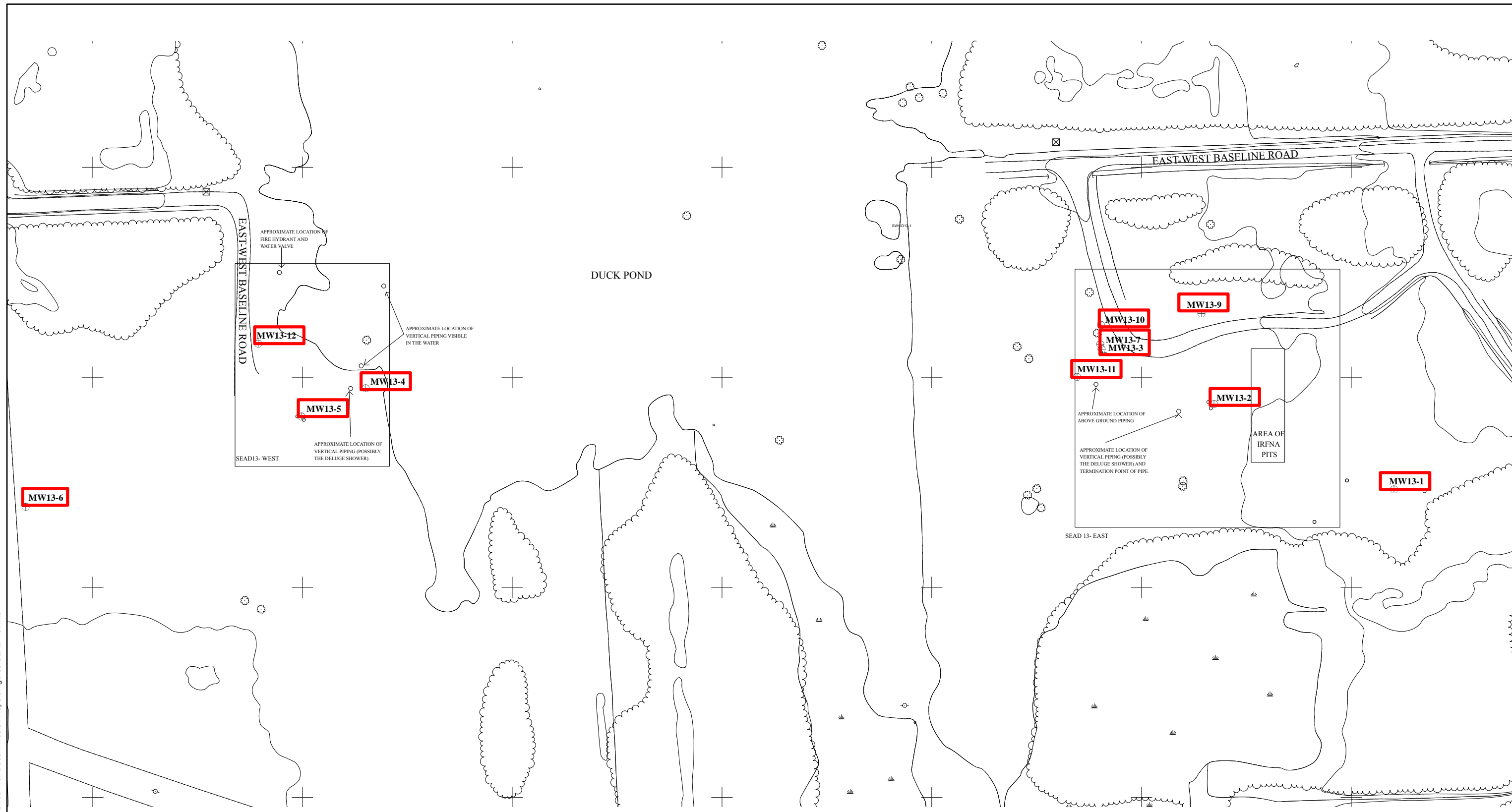
PARSONS

SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report



Figure 6b
Wells Decommissioned
SEAD-12

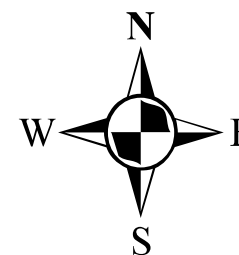
O:\SENECA\SEAD-12\figs_2007\12-TP_SB_LOC.APR

P:\PIT\Projects\Huntsville Cont W912DY-08-D-0003\TO#08\Well Decommissioning Report\Figures\SEAD-13.mxd



LEGEND

 MW-13
 Monitoring Well decommissioned in September 2010

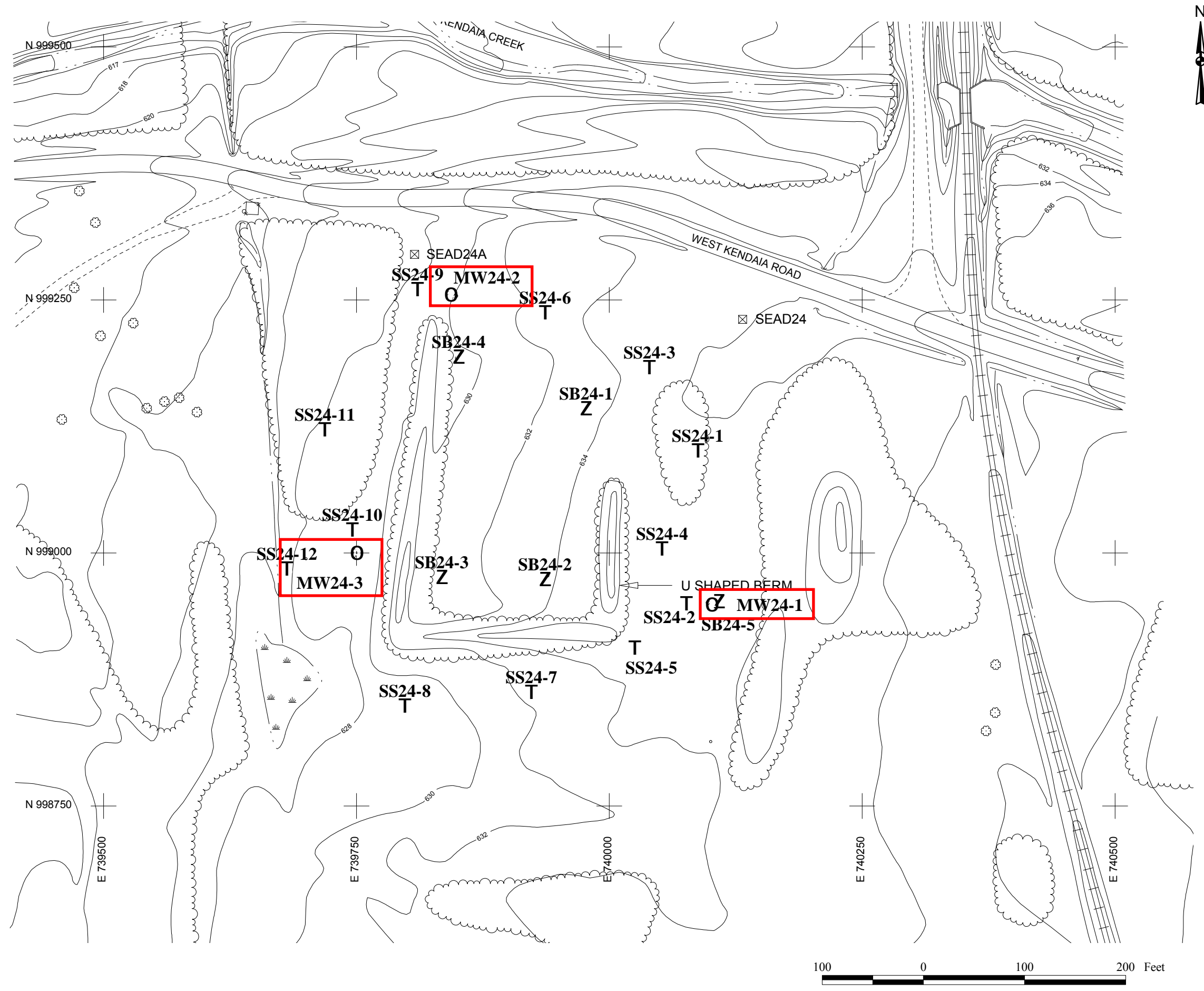


PARSONS
 SENECA ARMY DEPOT ACTIVITY
 Well Decommissioning Report

Figure 7
 SEAD-13 IRFNA Disposal Site
 Wells Decommissioned

FEBRUARY 2011

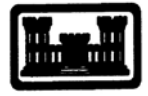
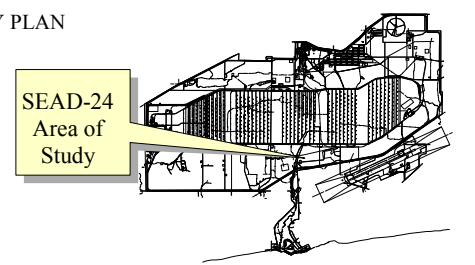
o:\seneca\Sead245067\sd245067.apr



LEGEND

- Wells decommissioned in Sept 2010.
- PAVED ROAD
- GROUND CONTOUR AND ELEVATION
- WETLAND
- BRUSH
- CHAIN LINK FENCE
- UTILITY POLE
- APPROXIMATE LOCATION OF FIRE HYDRANT
- RAILROAD
- EXISTING MONITORING WELL AND DESIGNATION
- EXISTING TEST PIT AND DESIGNATION
- PROPOSED MONITORING WELL AND DESIGNATION
- PROPOSED TEST PIT AND DESIGNATION
- Soil Samples
- Surface Soil Samples
- Berm Soil Samples
- Surface Water/Sediment Samples
- Surface Water Samples
- Sediment Samples
- GroundWater Samples
- GeoProbe Samples

KEY PLAN


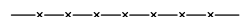



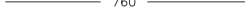


















PARSONS
PARSONS ENGINEERING SCIENCE, INC.

SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report

Figure 8
Wells Decommissioned
SEAD-24

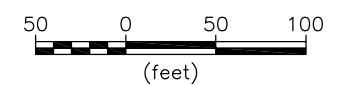
LEGEND

-  DRAINAGE DITCH
-  FENCE
-  UNPAVED ROAD
-  BRUSH LINE
-  RAILROAD
-  GROUND SURFACE ELEVATION CONTOUR
-  UNDERGROUND ELECTRIC UTILITY LINE
-  UNDERGROUND WATER UTILITY LINE
-  ROAD SIGN
-  OVERHEAD UTILITY POLE
-  HYDRANT
-  MANHOLE
-  UTILITY BOX
-  DECIDUOUS TREE
-  COORD. GRID (250' GRID)
-  POLE
-  SEAD-25 SURVEY MONUMENT
-  MONITORING WELL LOCATION & ELEVATION OF WATER TABLE
-  GROUNDWATER CONTOUR
-  INDICATES PREDOMINANT FLOW DIRECTION

-  Well decommissioned in Sept 2010.
-  Wells decommissioned previously.

NOTES:

1. TOPOGRAPHY BASED ON AERIAL SURVEY BY:
LOCKWOOD SURVEY
36 KARLAN DRIVE
ROCHESTER NEW YORK
2. HORIZONTAL DATUM IS BASED ON NAD83 PER SENECA ARMY DEPOT SEAD 26A MONUMENTS SURVEY CONTROL COORDINATES DATED 1994.
3. VERTICAL DATUM IS BASED ON NAD88.

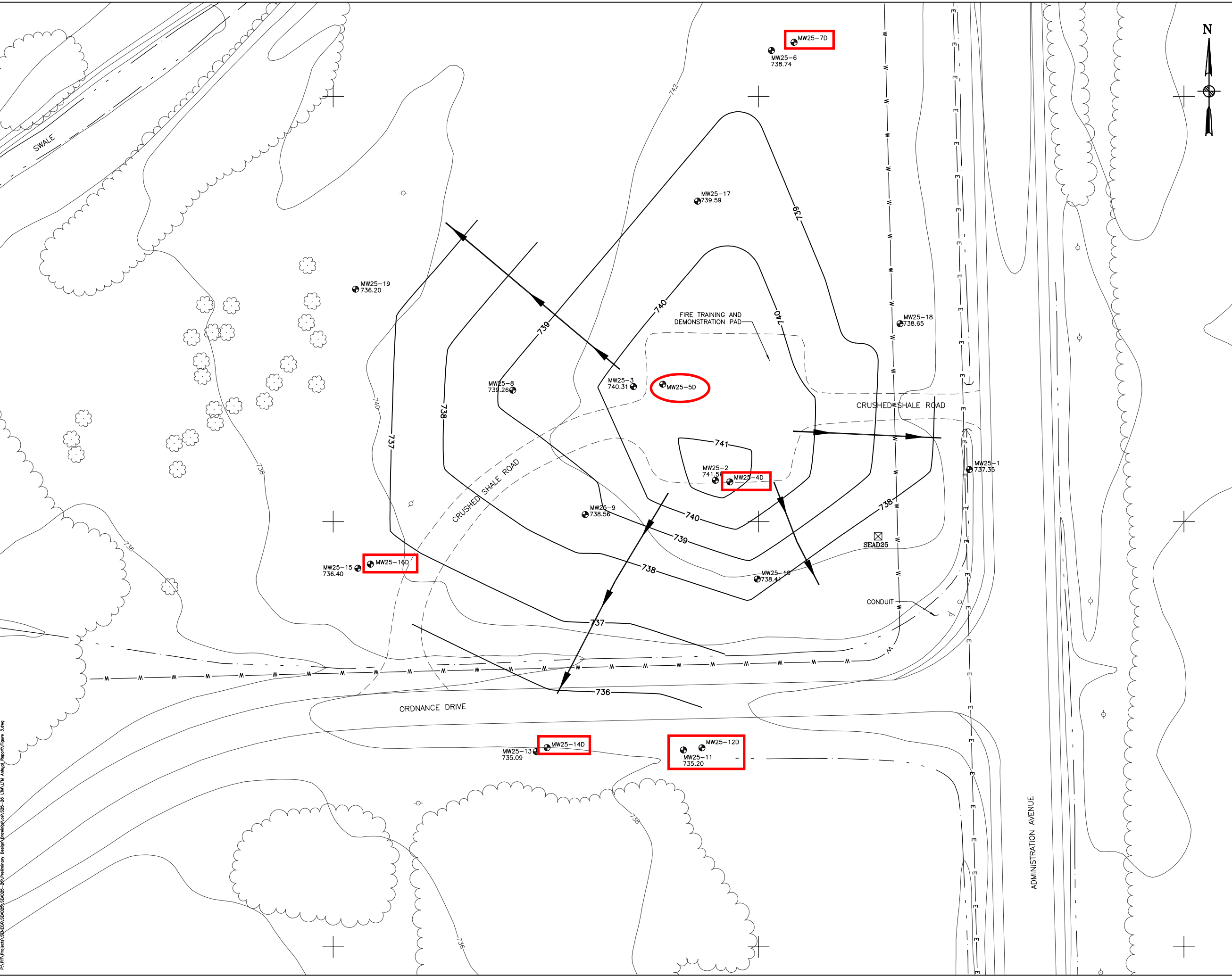


CLIENT/PROJECT TITLE
**SENECA ARMY DEPOT
Well Decommissioning Report**

DEPT. ENVIRONMENTAL ENGINEERING Dwg. No. 744538-05200

Figure 9
**Wells Decommissioned
SEAD-25**

SCALE AS SHOWN DATE JANUARY 2007 REV



P:\VP\Projects\SEAD\SEAD25\SEAD25-26 Preliminary Design\Drawings\Fig 9-26 LTA\TA.dwg Report\Figure 3.dwg



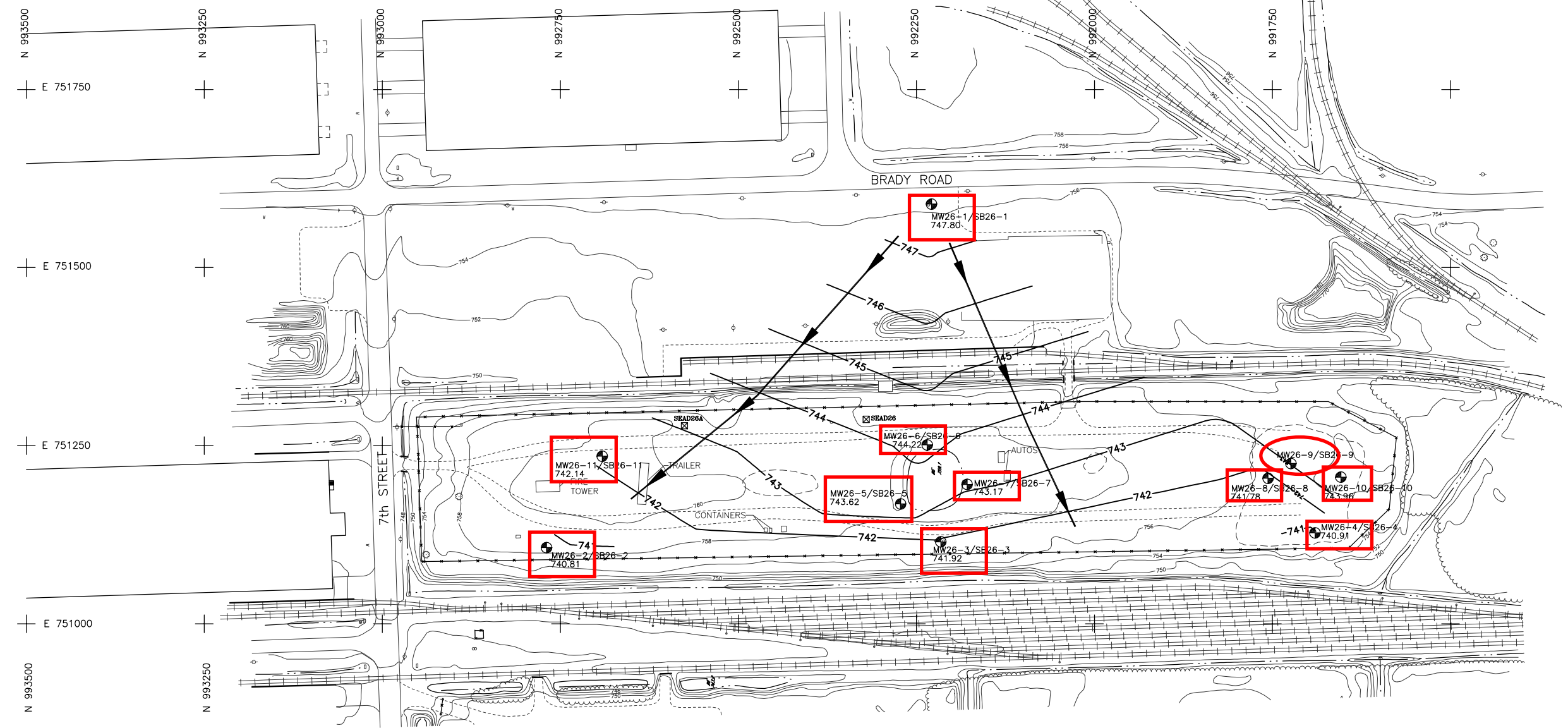
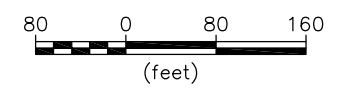
LEGEND

- DRAINAGE DITCH
- FENCE
- UNPAVED ROAD
- BRUSH LINE
- RAILROAD
- GROUND SURFACE ELEVATION CONTOUR
- UNDERGROUND ELECTRIC UTILITY LINE
- UNDERGROUND WATER UTILITY LINE
- ROAD SIGN
- OVERHEAD UTILITY POLE
- HYDRANT
- MANHOLE
- UTILITY BOX
- DECIDUOUS TREE
- COORD. GRID (250' GRID)
- POLE
- SEAD-26 SURVEY MONUMENT
- MONITORING WELL LOCATION & ELEVATION OF WATER TABLE
- GROUNDWATER CONTOUR
- INDICATES PREDOMINANT FLOW DIRECTION

- Well decommissioned in Sept 2010.
- Well decommissioned previously.

NOTES:

1. TOPOGRAPHY BASED ON AERIAL SURVEY BY:
LOCKWOOD SURVEY
36 KARLAN DRIVE
ROCHESTER NEW YORK
2. HORIZONTAL DATUM IS BASED ON NAD83 PER SENECA ARMY DEPOT SEAD 26A MONUMENTS SURVEY CONTROL COORDINATES DATED 1994.
3. VERTICAL DATUM IS BASED ON NAD88.

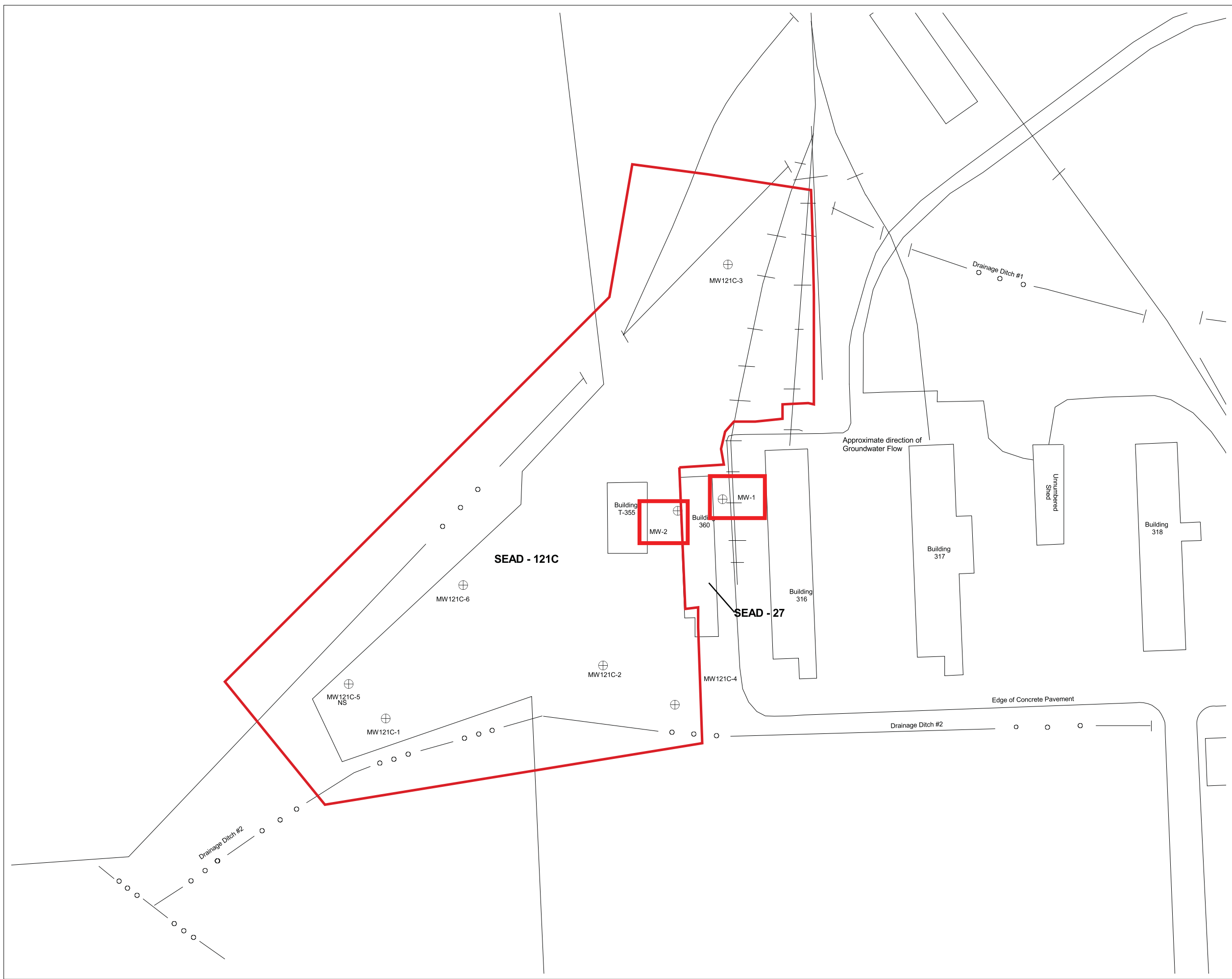


CLIENT/PROJECT TITLE
**SENECA ARMY DEPOT
Well Decommissioning Report**






DEPT. ENVIRONMENTAL ENGINEERING Dwg. No. 744538-05200

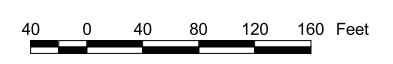
Figure 10
Wells Decommissioned
SEAD-26

SCALE AS SHOWN DATE JANUARY 2007 REV



LEGEND

-  Railroad Tracks
-  Site Boundary
-  Surface Water
-  Monitoring Well
-  Well decommissioned in Sept 2010.

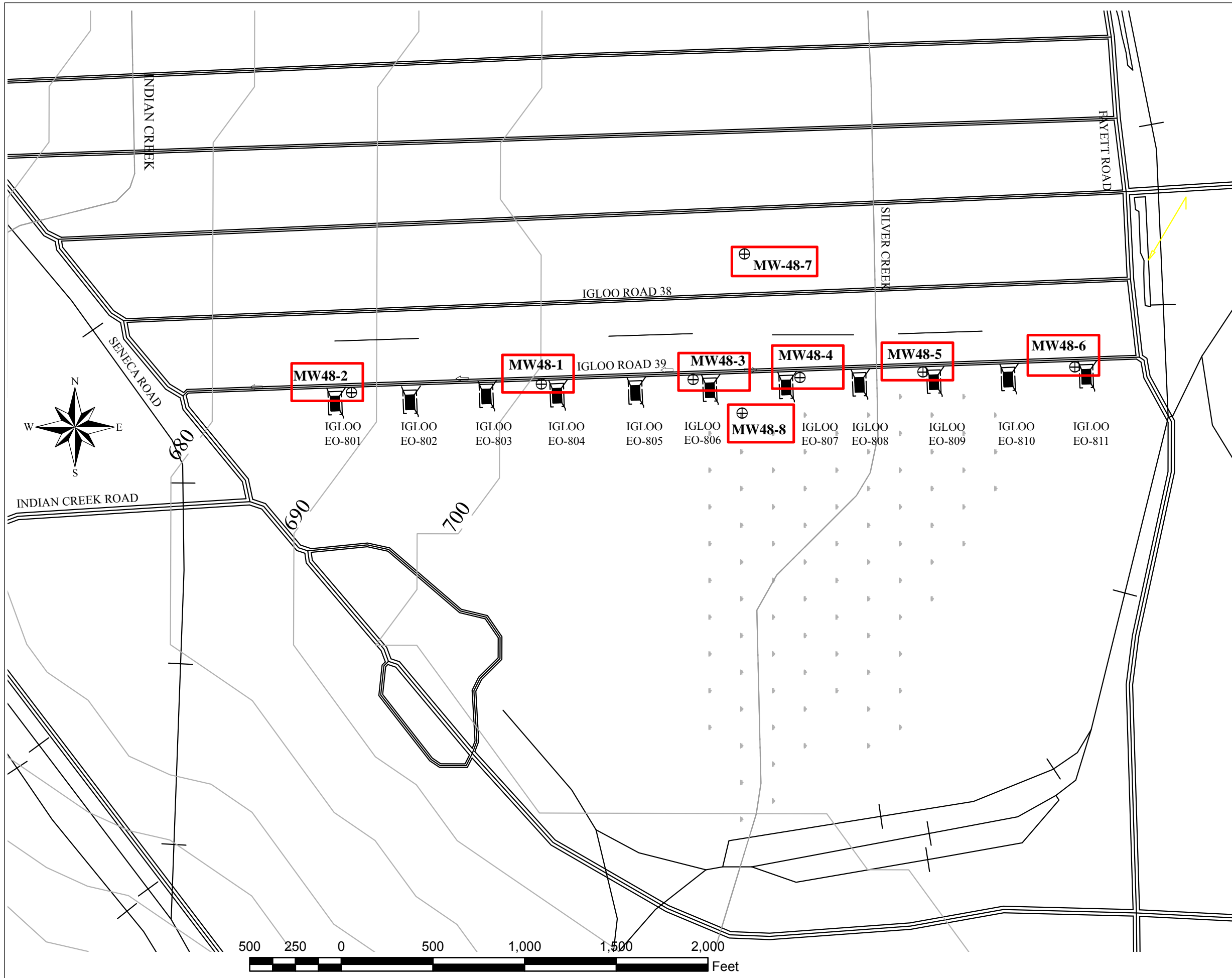


PARSONS

SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report

Figure 11
Wells Decommissioned
SEAD-27

P:\PIT\Projects\Huntsville Cont W912DY-08-D-0003\TO#08\Well Decommission Report\Figures\SEAD-48.mxd



LEGEND

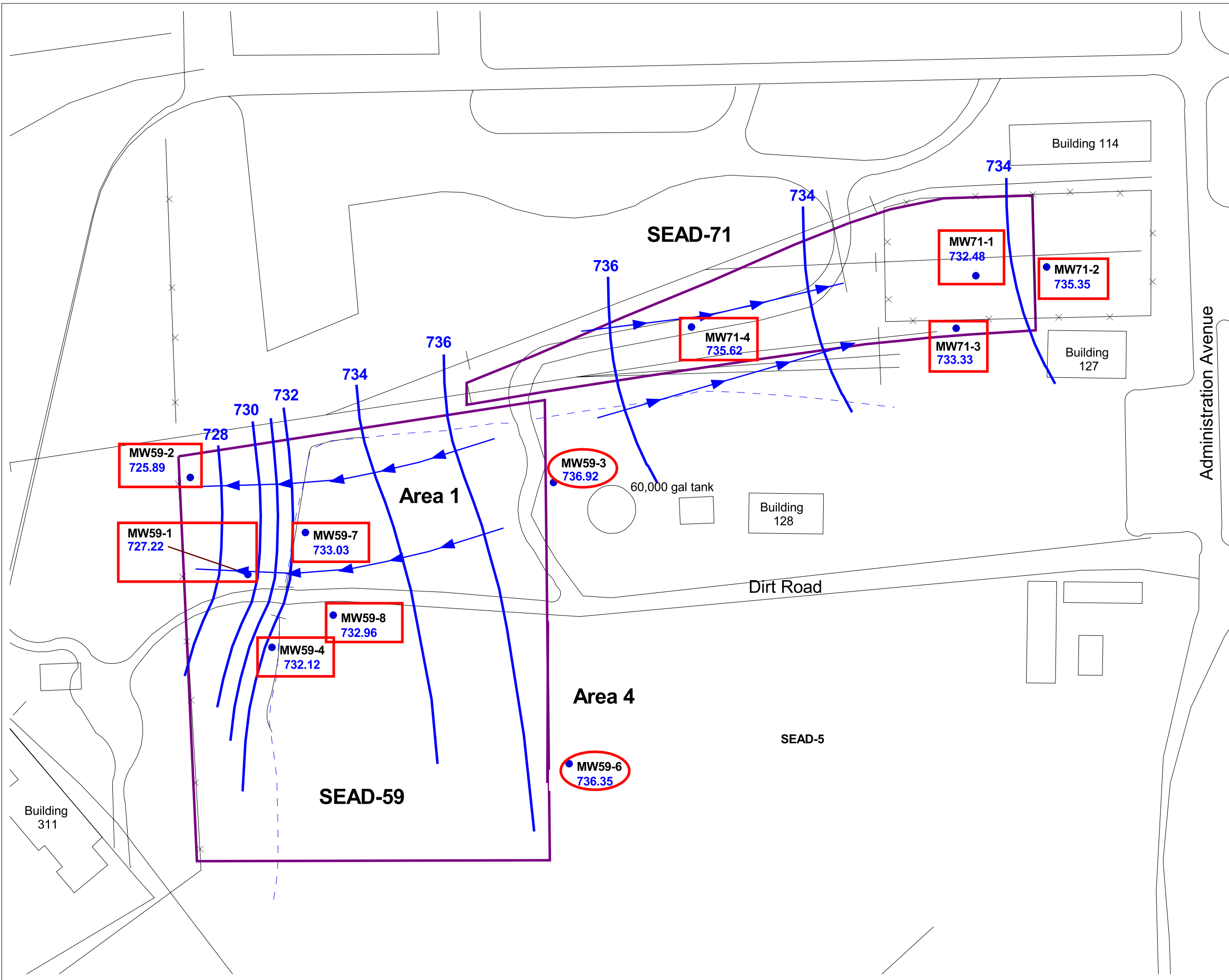
- ⊕ MW48-1 MONITORING WELL AND ID
- ∩ WATERWAY
- ∩ 10-FOOT GROUND ELEVATION
- WELLS DECOMMISSIONED IN SEPT 2010.











PARSONS

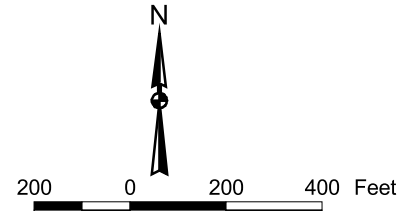
SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report

Figure 12
Wells Decommissioned
SEAD-48



LEGEND

-  Groundwater Contour
-  Direction of Groundwater Flow
-  Stream
-  Fence
-  Railroad Tracks
-  Approximate SEAD Boundary
-  Well decommissioned between Sept 2010 and Jan 2011.
-  Well decommissioned previously.

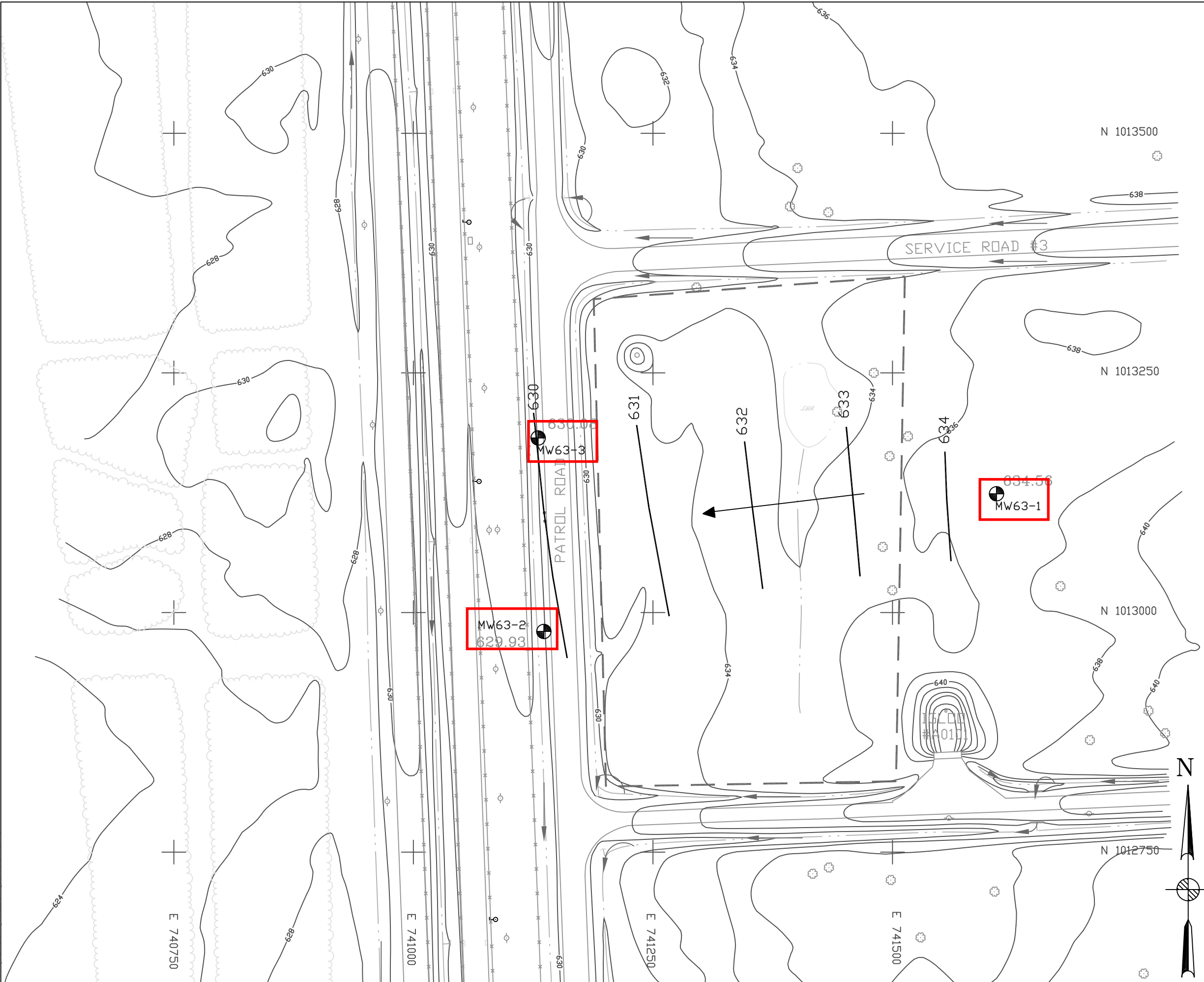


PARSONS

SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report

Figure 13
Wells Decommissioned
SEAD-59 and 71

R:\SENECA\63EECA\SD63GW.DWG



LEGEND

- MINOR WATERWAY
- MAJOR WATERWAY
- FENCE
- UNPAVED ROAD
- BRUSH LINE
- LANDFILL EXTENTS
- RAILROAD
- GROUND SURFACE ELEVATION CONTOUR
- ROAD SIGN
- DECIDUOUS TREE
- GUIDE POST
- FIRE HYDRANT
- MANHOLE
- CORDINATE GRID (250' GRID)
- POLE
- UTILITY BOX
- MAILBOX/RR SIGNAL
- OVERHEAD UTILITY POLE
- SURVEY MONUMENT

634.56
MW63-1
MONITORING WELL WITH WATER TABLE ELEVATION

GROUNDWATER ELEVATION CONTOUR (ARROW INDICATES DIRECTION OF FLOW)

GROUNDWATER LEVEL MEASUREMENTS MADE ON 7/06/94

DIRECTION OF SURFACE WATER FLOW

APPROXIMATE AOC BOUNDARY

Well decommissioned in Sept 2010.



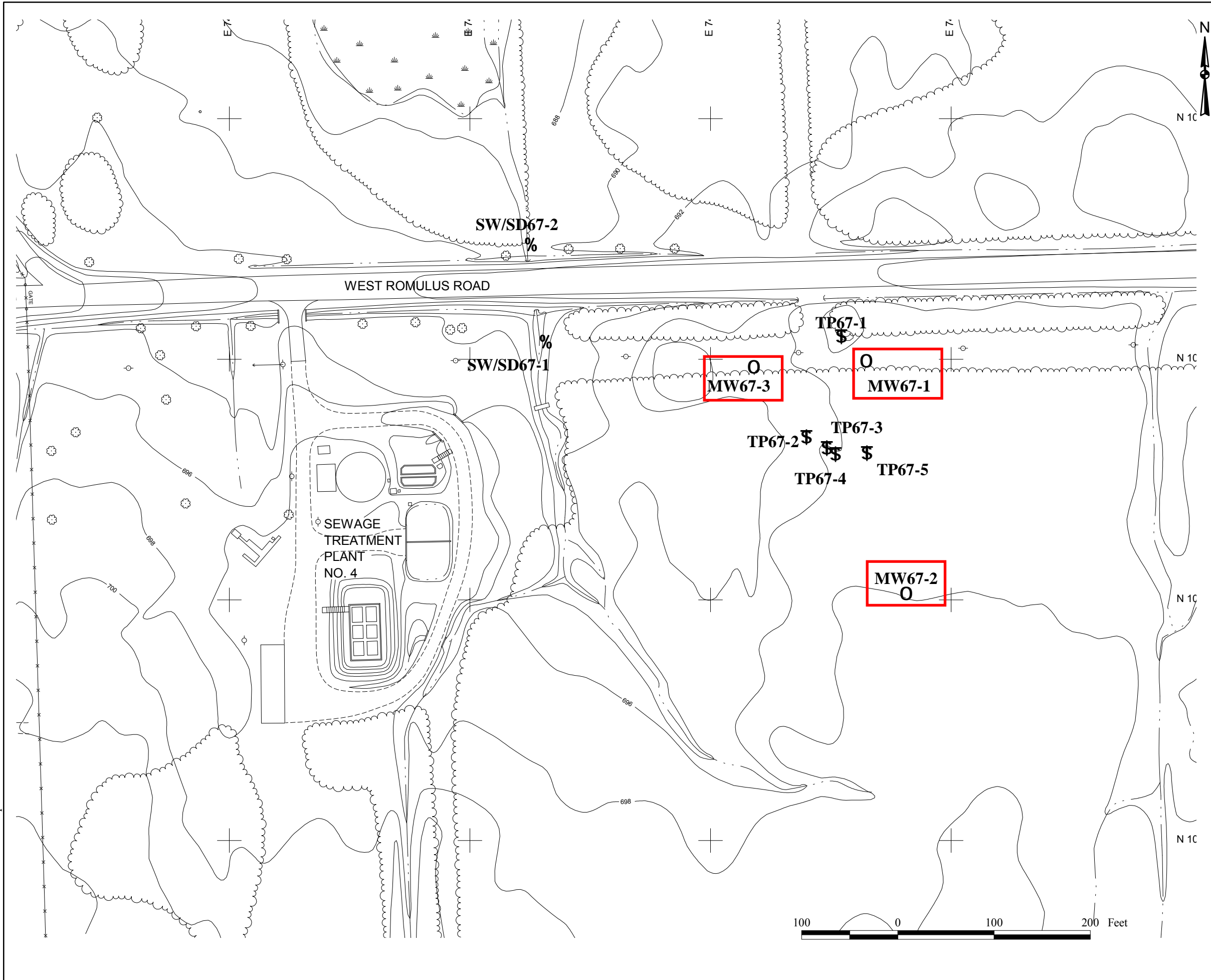
P PARSONS
PARSONS ENGINEERING SCIENCE, INC.

CLIENT/PROJECT TITLE
SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report

DEPT. ENVIRONMENTAL ENGINEERING Dwg. No. 734364-01001

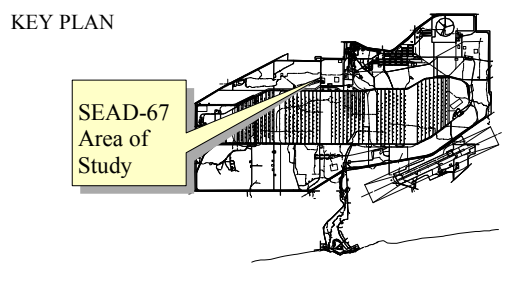
Figure 14
Wells Decommissioned
SEAD-63

SCALE AS NOTED DATE SEPTEMBER 1999 REV A



LEGEND

	Well decommissioned in Sept 2010.
	PAVED ROAD
	GROUND CONTOUR AND ELEVATION
	WETLAND
	BRUSH
	CHAIN LINK FENCE
	UTILITY POLE
	APPROXIMATE LOCATION OF FIRE HYDRANT
	RAILROAD
	EXISTING MONITORING WELL AND DESIGNATION
	EXISTING TEST PIT AND DESIGNATION
	PROPOSED MONITORING WELL AND DESIGNATION
	PROPOSED TEST PIT AND DESIGNATION
	Soil Samples
	Surface Soil Samples
	Berm Soil Samples
	Surface Water/Sediment Samples
	Surface Water Samples
	Sediment Samples
	GroundWater Samples
	GeoProbe Samples



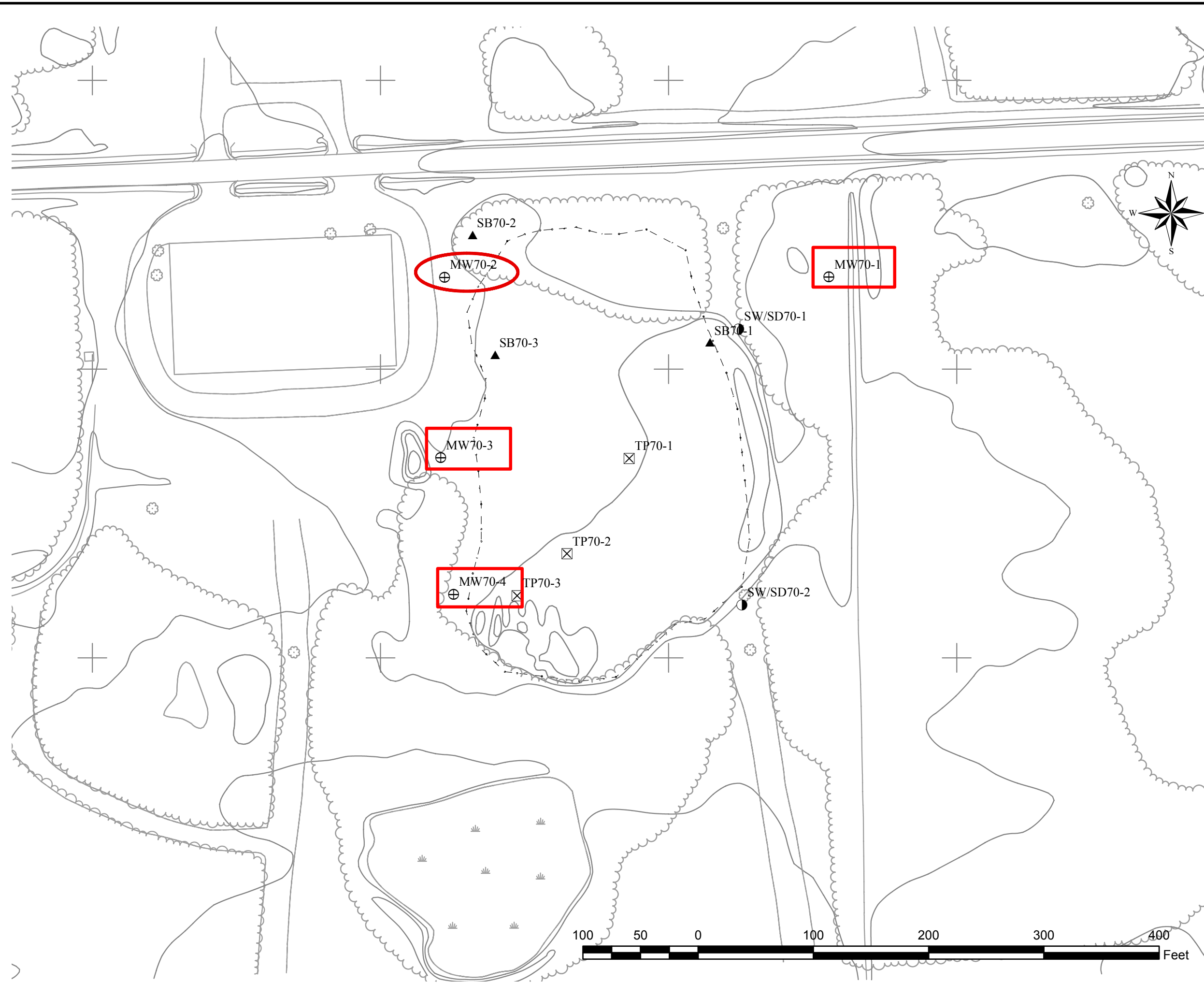
PARSONS
PARSONS ENGINEERING SCIENCE, INC.

SENECA ARMY DEPOT ACTIVITY
 Well Decommissioning Report

Figure 15
 Wells Decommissioned
 SEAD-67

o:\seneca\Sead245067\sd245067.apr





- Legend:
- ⊕ Monitoring Well Location
 - Well decommissioned in Sept 2010.
 - Well decommissioned previously

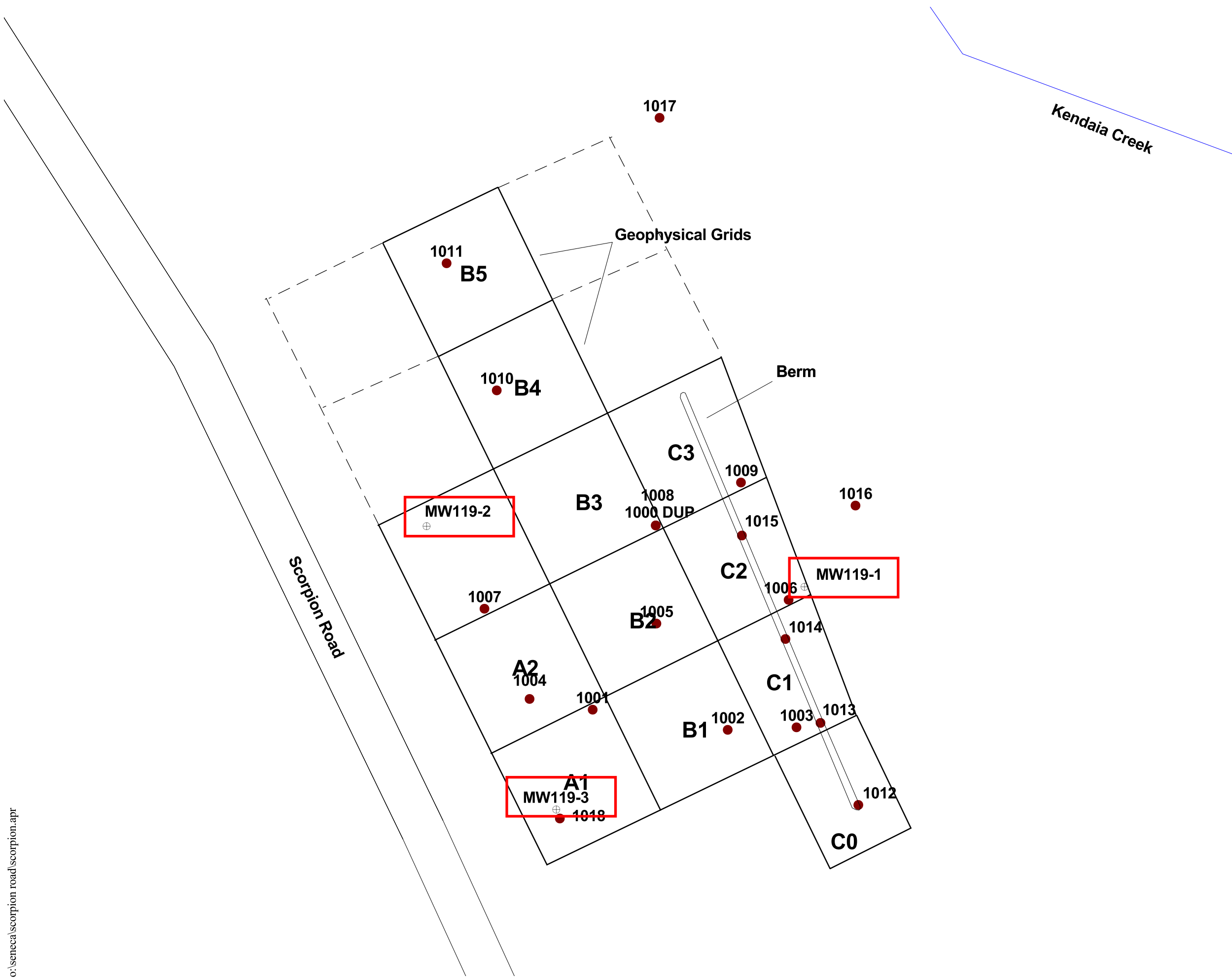


PARSONS

SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report

Figure 16
Wells Decommissioned
SEAD-70

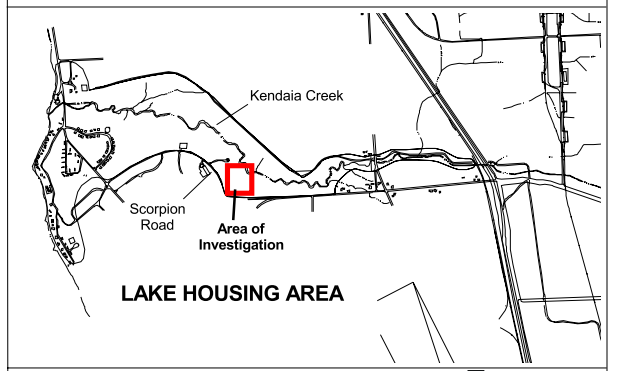
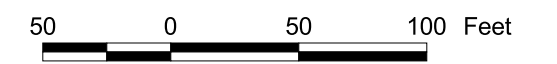
FEBRUARY 2011



LEGEND

- 0001 ● Surface Soil Sample Location
- MW119-1 ⊕ Monitoring Well Location
- Well decommissioned in Jan 2011.

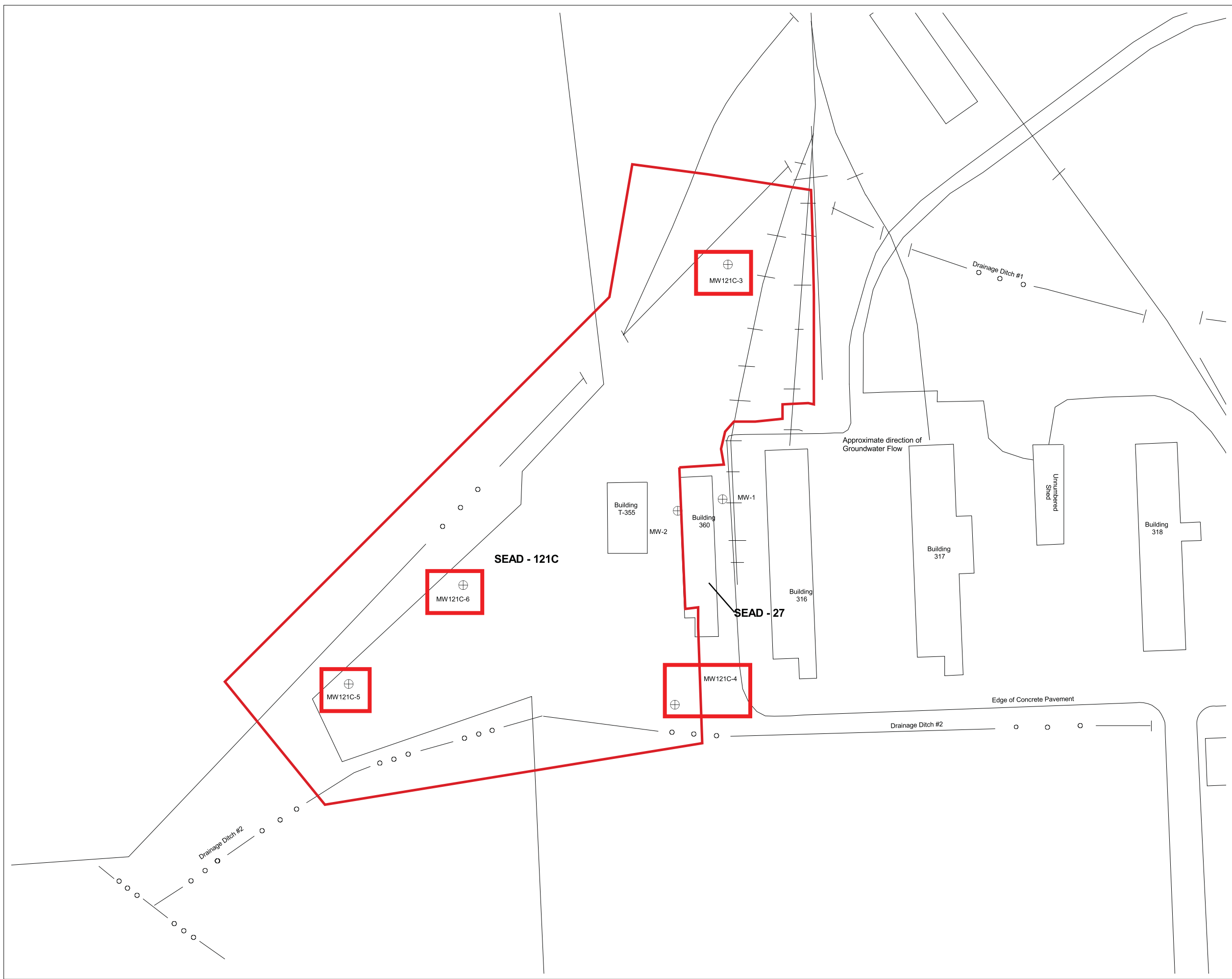
Note: Berm is approximately 4 ft wide by 4 ft high





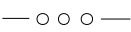


PARSONS

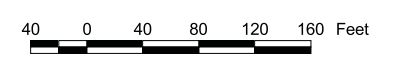
SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report

Figure 17
Wells Decommissioned
SEAD-119B



LEGEND

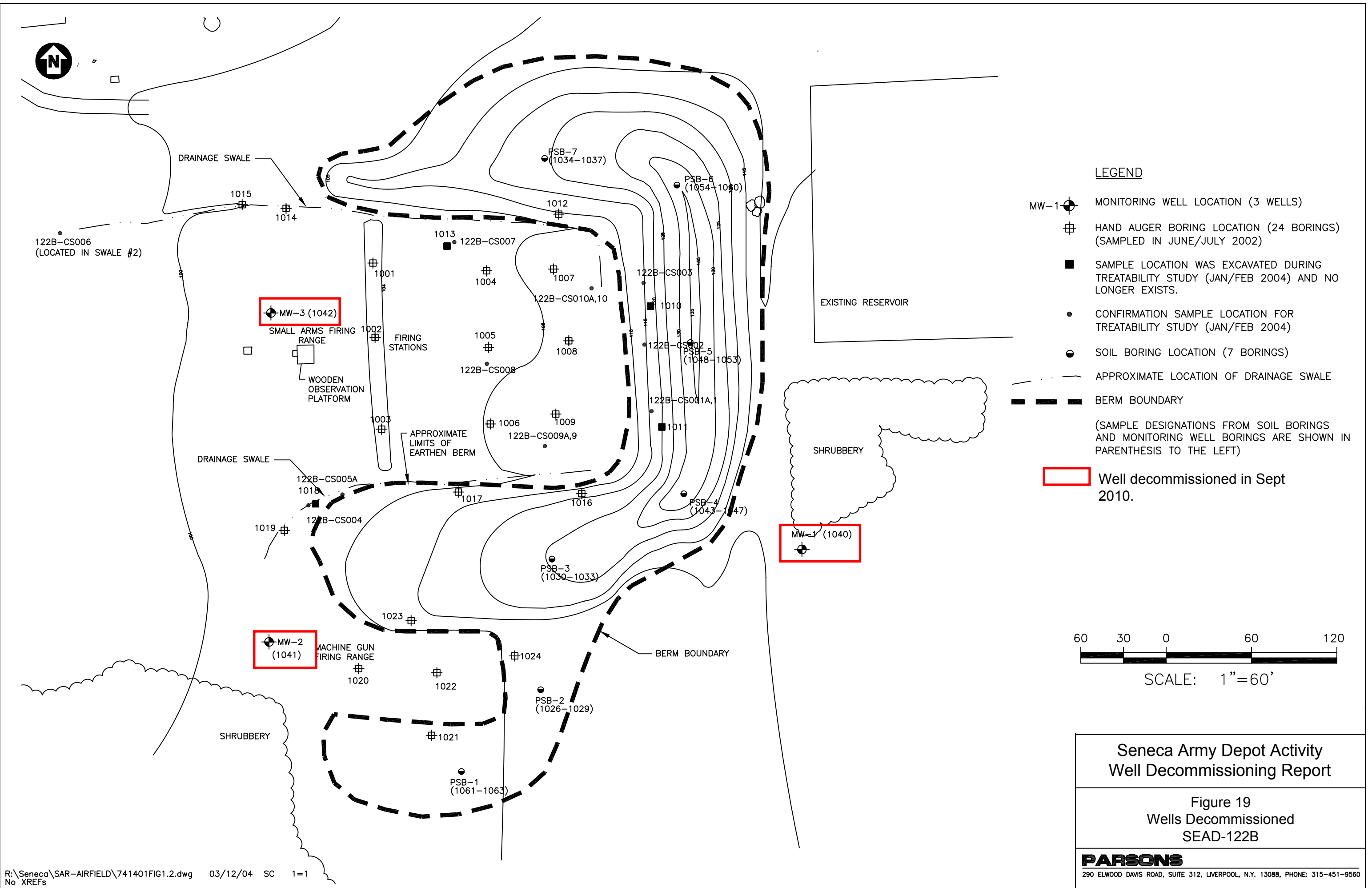
-  Railroad Tracks
-  Site Boundary
-  Surface Water
-  MW121C-6
Monitoring Well
-  Well decommissioned in Sept 2010.



PARSONS

SENECA ARMY DEPOT ACTIVITY
Well Decommissioning Report

Figure 18
Wells Decommissioned
SEAD-121C



LEGEND

- MW-1 MONITORING WELL LOCATION (3 WELLS)
 - HAND AUGER BORING LOCATION (24 BORINGS) (SAMPLED IN JUNE/JULY 2002)
 - SAMPLE LOCATION WAS EXCAVATED DURING TREATABILITY STUDY (JAN/FEB 2004) AND NO LONGER EXISTS.
 - CONFIRMATION SAMPLE LOCATION FOR TREATABILITY STUDY (JAN/FEB 2004)
 - SOIL BORING LOCATION (7 BORINGS)
 - APPROXIMATE LOCATION OF DRAINAGE SWALE
 - BERM BOUNDARY
- (SAMPLE DESIGNATIONS FROM SOIL BORINGS AND MONITORING WELL BORINGS ARE SHOWN IN PARENTHESIS TO THE LEFT)

Well decommissioned in Sept 2010.



SCALE: 1"=60'

**Seneca Army Depot Activity
Well Decommissioning Report**

Figure 19
Wells Decommissioned
SEAD-122B

PARSONS
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, N.Y. 13088, PHONE: 315-451-9560

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

U.S. ARMY ENVIRONMENTAL HYGIENE AGENCY
GROUND-WATER MONITORING WELL SUMMARY

PROJECT 38-26-0313 83

DATE 13-21 Oct

PROJECT _____
WELL NUMBER _____
1. Height of Casing of _____
2. T _____

WELL NUMBER	MW-18	MW-19	MW-20	MW-22	
1. Height of Monitoring Well Casing above ground level	30"	30"	30"	30"	30"
2. Total Depth of Well below ground level	9	9	8' 10"	9	17' 5"
3. Depth to Top of Well Screen below ground level	4	4	3' 10"	4	12' 5"
4. Well Screen Length	5	5	5	5	5
5. Well Screen Slot Size	0.010	0.010	0.010	0.010	0.010
6. Well Diameter	2 in ID	2 in ID	2 in ID	2 in ID	2 in ID
7. Monitoring Well Casing Material	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC
8. Monitoring Well Screen Material	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC
9. Grout Thickness below ground level	3' 10"	4	3	3' 11"	10' 6"
10. Depth to Top of Bentonite Seal below ground level	All wells grouted to surface with bentonite				
11. Bentonite Seal Thickness	3' 10"	4	3	3' 11"	10' 6"
12. Depth to Top of Sand Pack	3' 10"	4	3	3' 11"	10' 6"
13. Depth to Static Water Level from top of monitoring well casing	5' 11"	5' 5½"	6' 8"	6' 6"	18' 8½"
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	19 Oct 87	19 Oct 87	19 Oct 87	19 Oct 87
15. Elevation at ground level	654.6	644.0	644.1	645.1	645.8
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	19 Oct 87	19 Oct 87	19 Oct 87	19 Oct 87
Comments					

U.S. ARMY ENVIRONMENTAL HYGIENE AGENCY
GROUND-WATER MONITORING WELL SUMMARY

PROJECT 38-26-0313-88

DATE 13-21 Oct 87

WELL NUMBER	MW-23	MW-24	MW-25	MW-26	
1. Height of Monitoring Well Casing above ground level	30"	30"	30"	30"	
2. Total Depth of Well below ground level	9'	9'	9'	9'	
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	
7. Monitoring Well Casing Material	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	
8. Monitoring Well Screen Material	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	
9. Grout Thickness below ground level	4	3	4	4' 10"	
10. Depth to Top of Bentonite Seal below ground level	All wells grouted to surface with bentonite				
11. 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					

AGENCY SUMMARY
DATE 13-21 Oct
30"
30"
5"

U.S. ARMY ENVIRONMENTAL HYGIENE AGENCY
GROUND-WATER MONITORING WELL SUMMARY

PROJECT Seneca Army Depot 38-26-K928-90

DATE November 1989

WELL NUMBER	MW - 27	MW - 28	MW - 29	MW - 30	MW - 31
1. Height of Monitoring Well 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	3.0'	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 Material	PVC	PVC	PVC	PVC	PVC
9. Grout Thickness below ground level	ALL WELLS GROUTED TO SURFACE WITH BENTONITE.				
10. Depth to Top of Bentonite Seal below ground level	0	0	0	0	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					
Date Measured					
15. Elevation at ground level					
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					

U.S. ARMY ENVIRONMENTAL HYGIENE AGENCY
GROUND-WATER MONITORING WELL SUMMARY

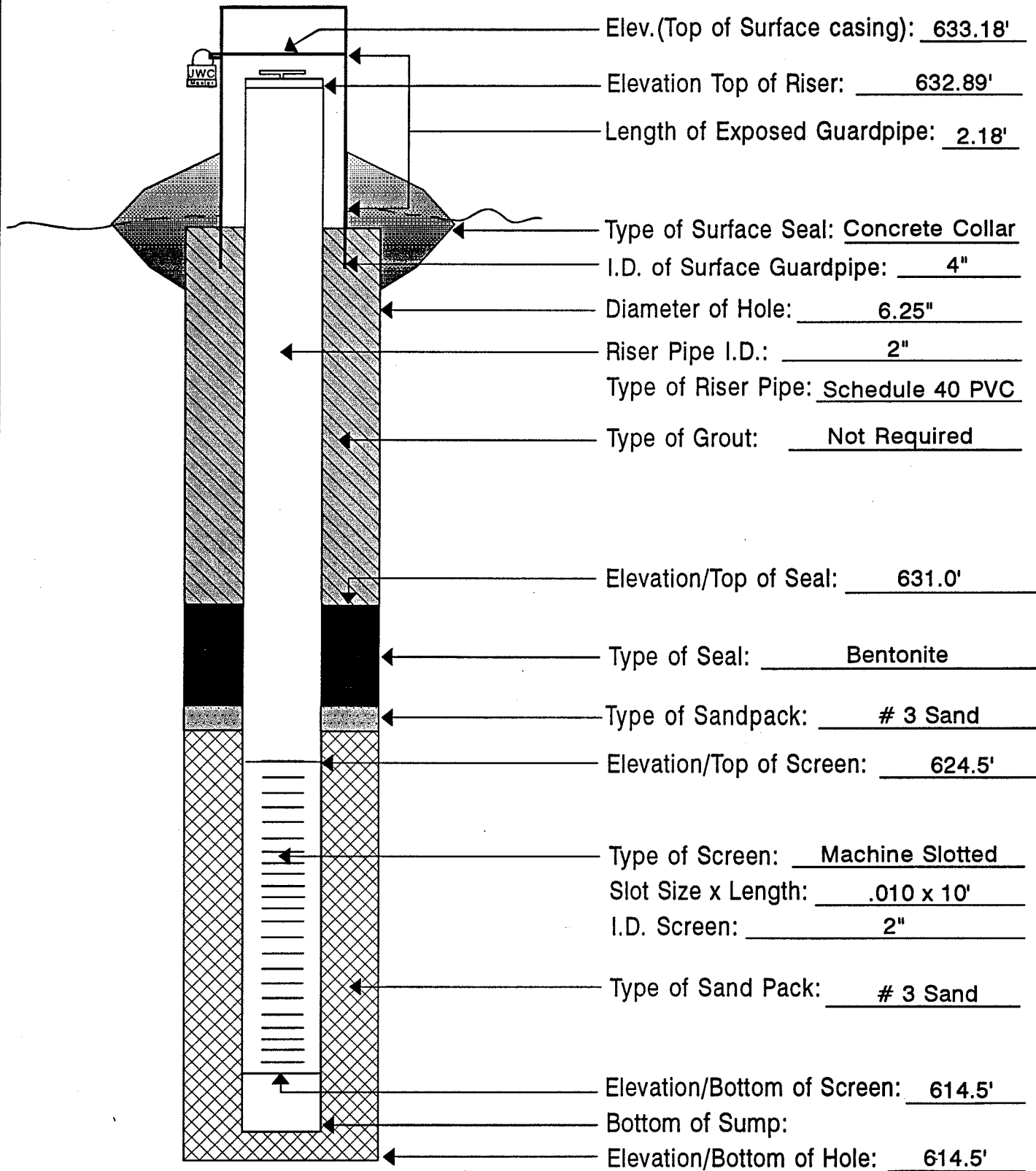
PROJECT Seneca Army Depot 38-26-K928-90

DATE November 1989

WELL NUMBER	MW - 32	MW - 33			
1. Height of Monitoring Well Casing above ground level	1.3'	1.5'			
2. Total Depth of Well below ground level	8.7'	8.5'			
3. Depth to Top of Well Screen below ground level	3.7'	3.5'			
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			
8. Monitoring Well Screen Material	PVC	PVC			
9. Grout Thickness below ground level	ALL WELLS GROUTED TO SURFACE WITH BENTONITE				
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					
Date Measured					
15. Elevation at ground 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			
Comments					

OVERBURDEN MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	Ash Landfill (MW-34)	Drilling Method	Hollow Stem Auger
Date	October 24, 1991	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 633.18'

Elevation Top of Riser: 632.89'

Length of Exposed Guardpipe: 2.18'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 6.25"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Not Required

Elevation/Top of Seal: 631.0'

Type of Seal: Bentonite

Type of Sandpack: # 3 Sand

Elevation/Top of Screen: 624.5'

Type of Screen: Machine Slotted

Slot Size x Length: .010 x 10'

I.D. Screen: 2"

Type of Sand Pack: # 3 Sand

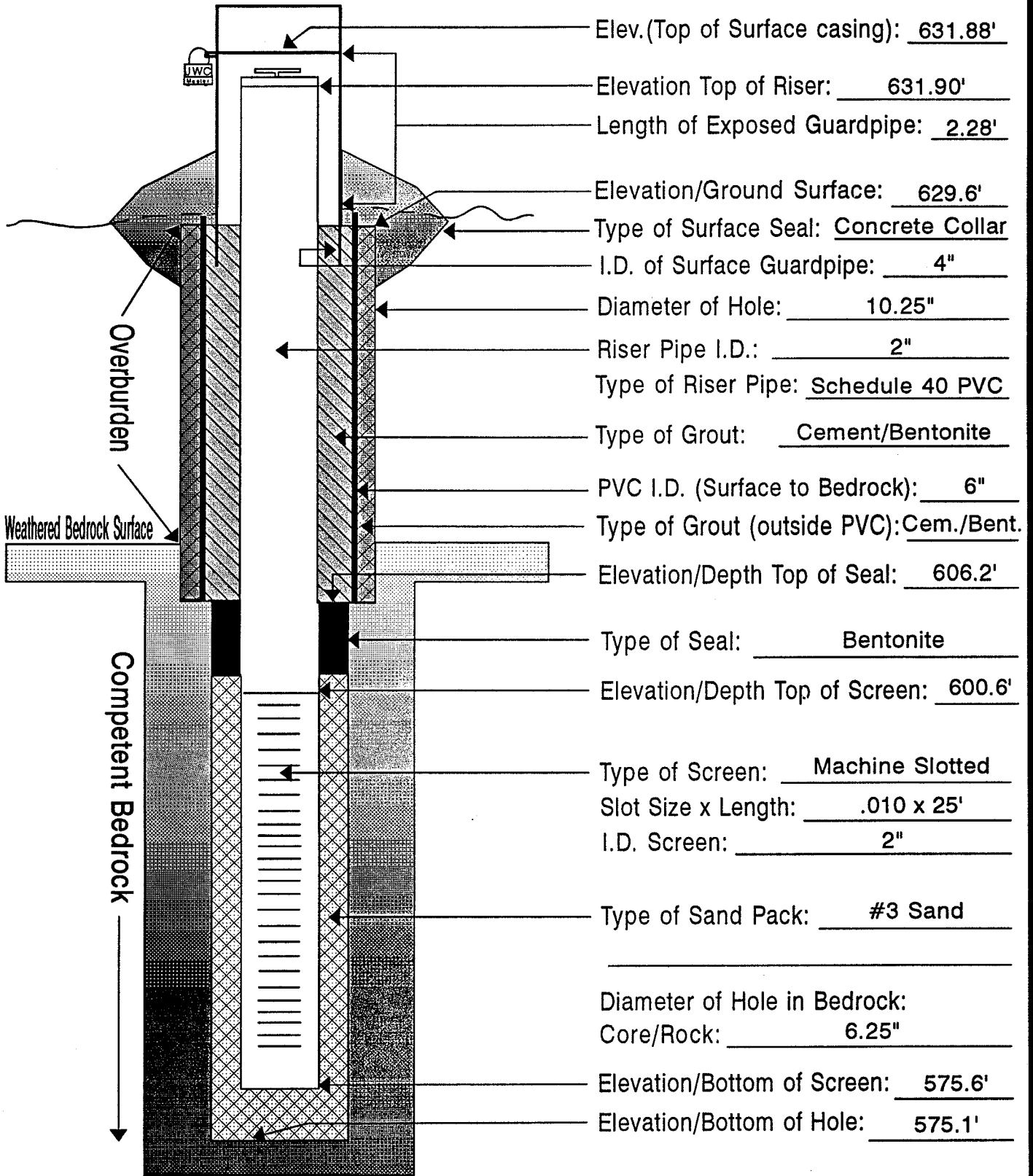
Elevation/Bottom of Screen: 614.5'

Bottom of Sump:

Elevation/Bottom of Hole: 614.5'

BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	Ash Landfill (MW-35D)	Drilling Method	Hol.Stem Auger/Air Rotary
Date	November 5, 1991	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 631.88'

Elevation Top of Riser: 631.90'

Length of Exposed Guardpipe: 2.28'

Elevation/Ground Surface: 629.6'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10.25"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Cement/Bentonite

PVC I.D. (Surface to Bedrock): 6"

Type of Grout (outside PVC): Cem./Bent.

Elevation/Depth Top of Seal: 606.2'

Type of Seal: Bentonite

Elevation/Depth Top of Screen: 600.6'

Type of Screen: Machine Slotted

Slot Size x Length: .010 x 25'

I.D. Screen: 2"

Type of Sand Pack: #3 Sand

Diameter of Hole in Bedrock:

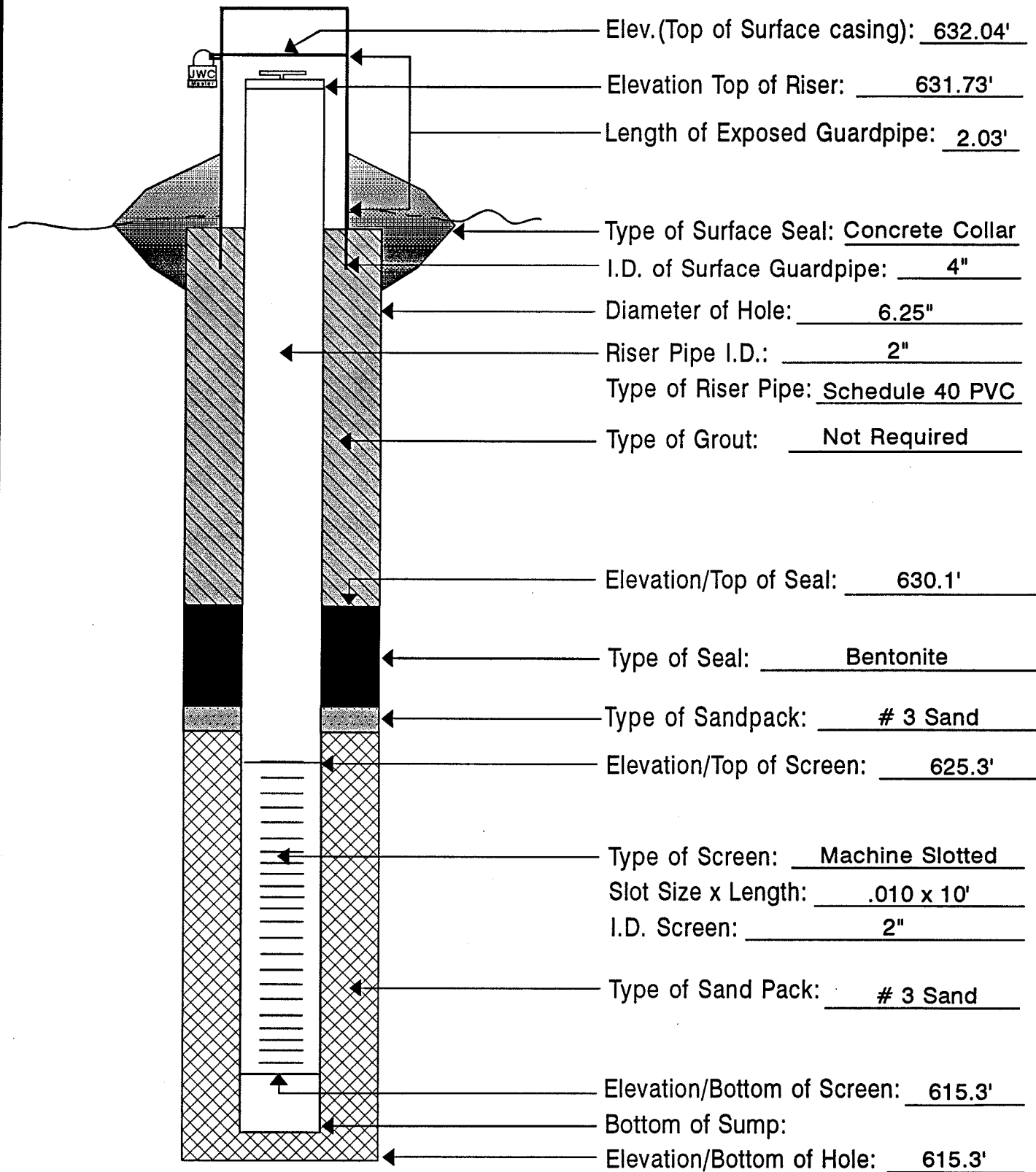
Core/Rock: 6.25"

Elevation/Bottom of Screen: 575.6'

Elevation/Bottom of Hole: 575.1'

OVERBURDEN MONITORING WELL

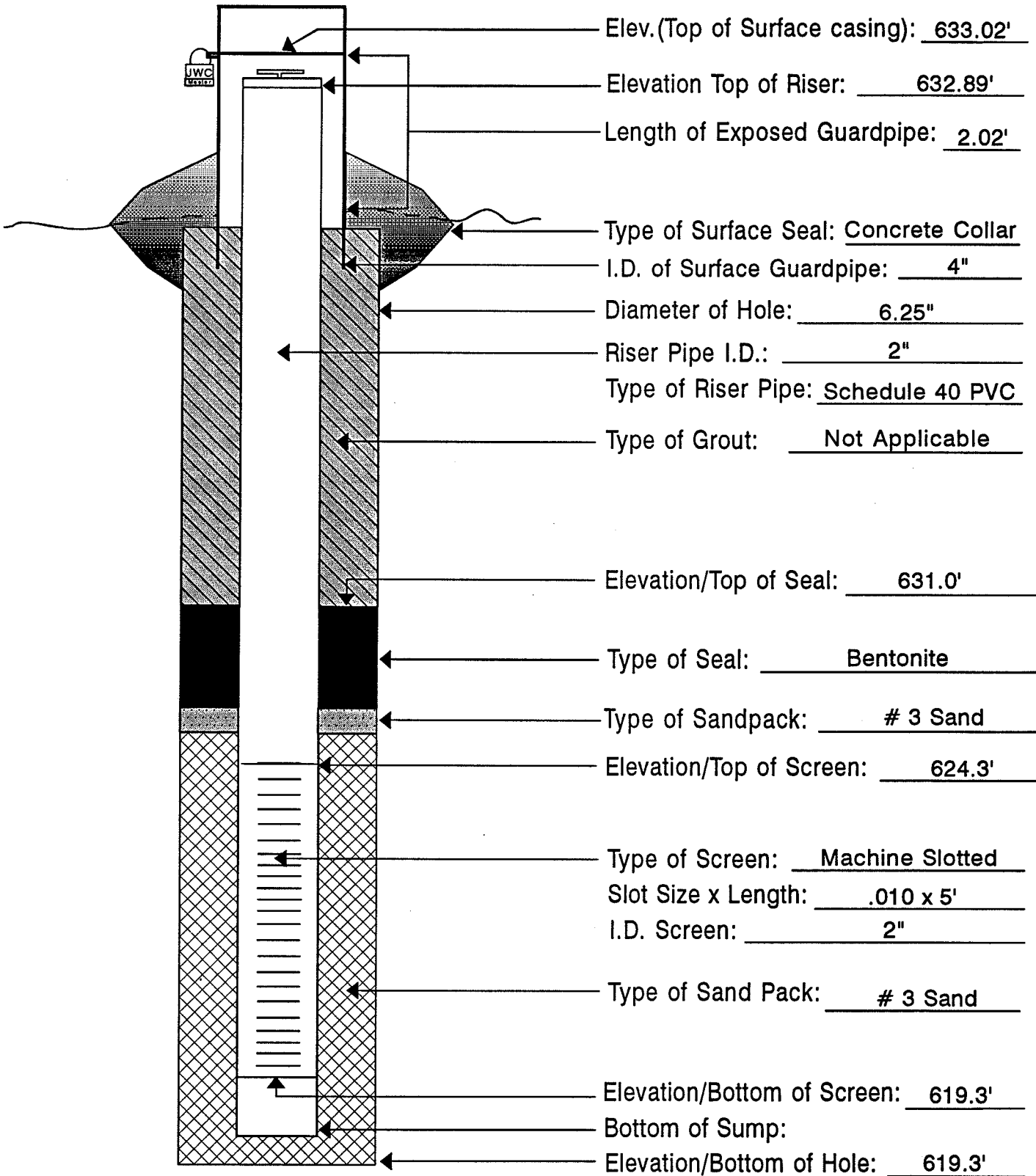
Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	Ash Landfill (MW-36)	Drilling Method	Hollow Stem Auger
Date	October 30, 1991	Development Method	Teflon Bailer



- Elev.(Top of Surface casing): 632.04'
- Elevation Top of Riser: 631.73'
- Length of Exposed Guardpipe: 2.03'
- Type of Surface Seal: Concrete Collar
- I.D. of Surface Guardpipe: 4"
- Diameter of Hole: 6.25"
- Riser Pipe I.D.: 2"
- Type of Riser Pipe: Schedule 40 PVC
- Type of Grout: Not Required
- Elevation/Top of Seal: 630.1'
- Type of Seal: Bentonite
- Type of Sandpack: # 3 Sand
- Elevation/Top of Screen: 625.3'
- Type of Screen: Machine Slotted
- Slot Size x Length: .010 x 10'
- I.D. Screen: 2"
- Type of Sand Pack: # 3 Sand
- Elevation/Bottom of Screen: 615.3'
- Bottom of Sump:
- Elevation/Bottom of Hole: 615.3'

OVERBURDEN MONITORING WELL

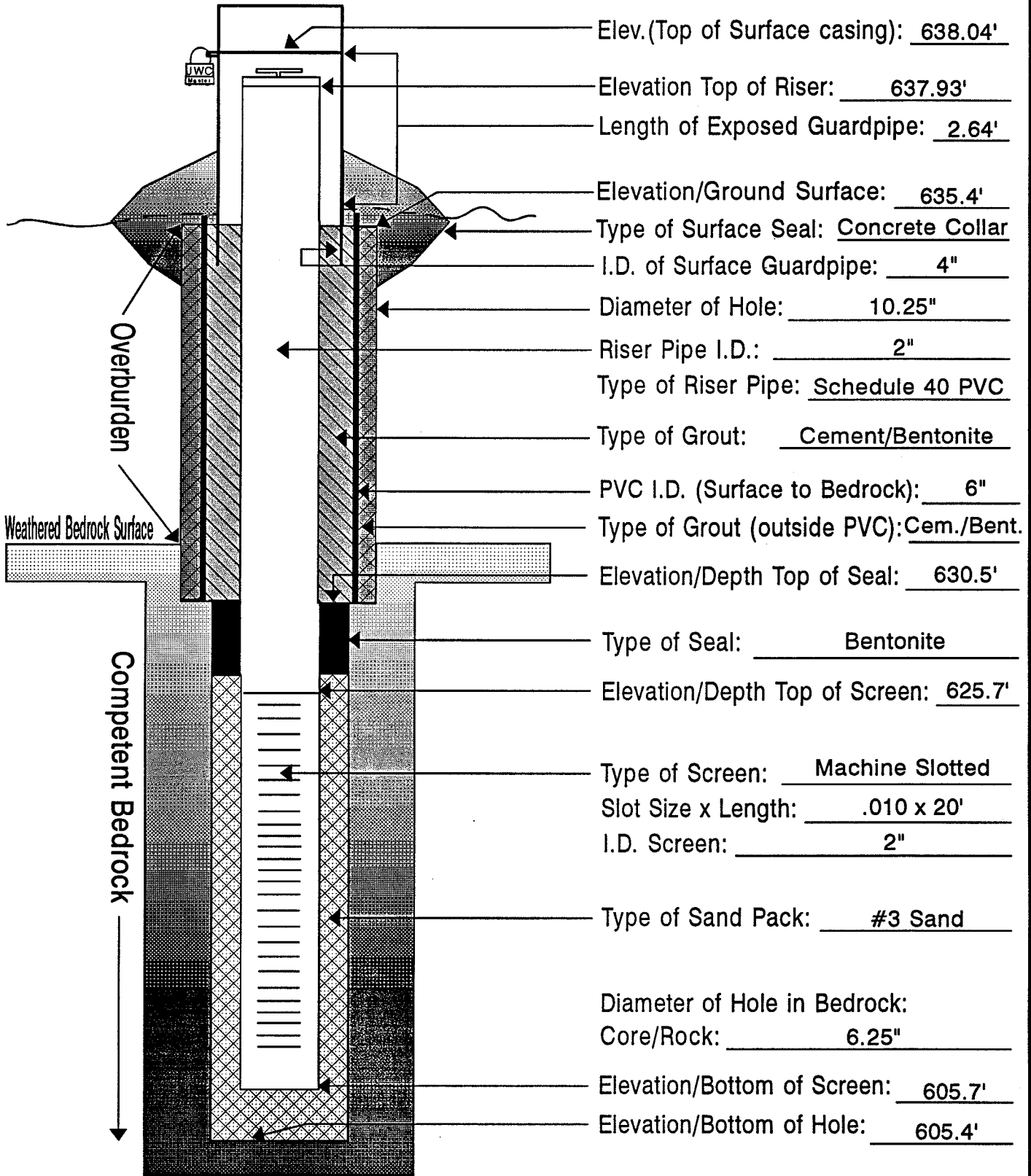
Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	Ash Landfill (MW-37)	Drilling Method	Hollow Stem Auger
Date	October 25, 1991	Development Method	Teflon Bailer



- Elev.(Top of Surface casing): 633.02'
- Elevation Top of Riser: 632.89'
- Length of Exposed Guardpipe: 2.02'
- Type of Surface Seal: Concrete Collar
- I.D. of Surface Guardpipe: 4"
- Diameter of Hole: 6.25"
- Riser Pipe I.D.: 2"
- Type of Riser Pipe: Schedule 40 PVC
- Type of Grout: Not Applicable
- Elevation/Top of Seal: 631.0'
- Type of Seal: Bentonite
- Type of Sandpack: # 3 Sand
- Elevation/Top of Screen: 624.3'
- Type of Screen: Machine Slotted
- Slot Size x Length: .010 x 5'
- I.D. Screen: 2"
- Type of Sand Pack: # 3 Sand
- Elevation/Bottom of Screen: 619.3'
- Bottom of Sump:
- Elevation/Bottom of Hole: 619.3'

BEDROCK MONITORING WELL

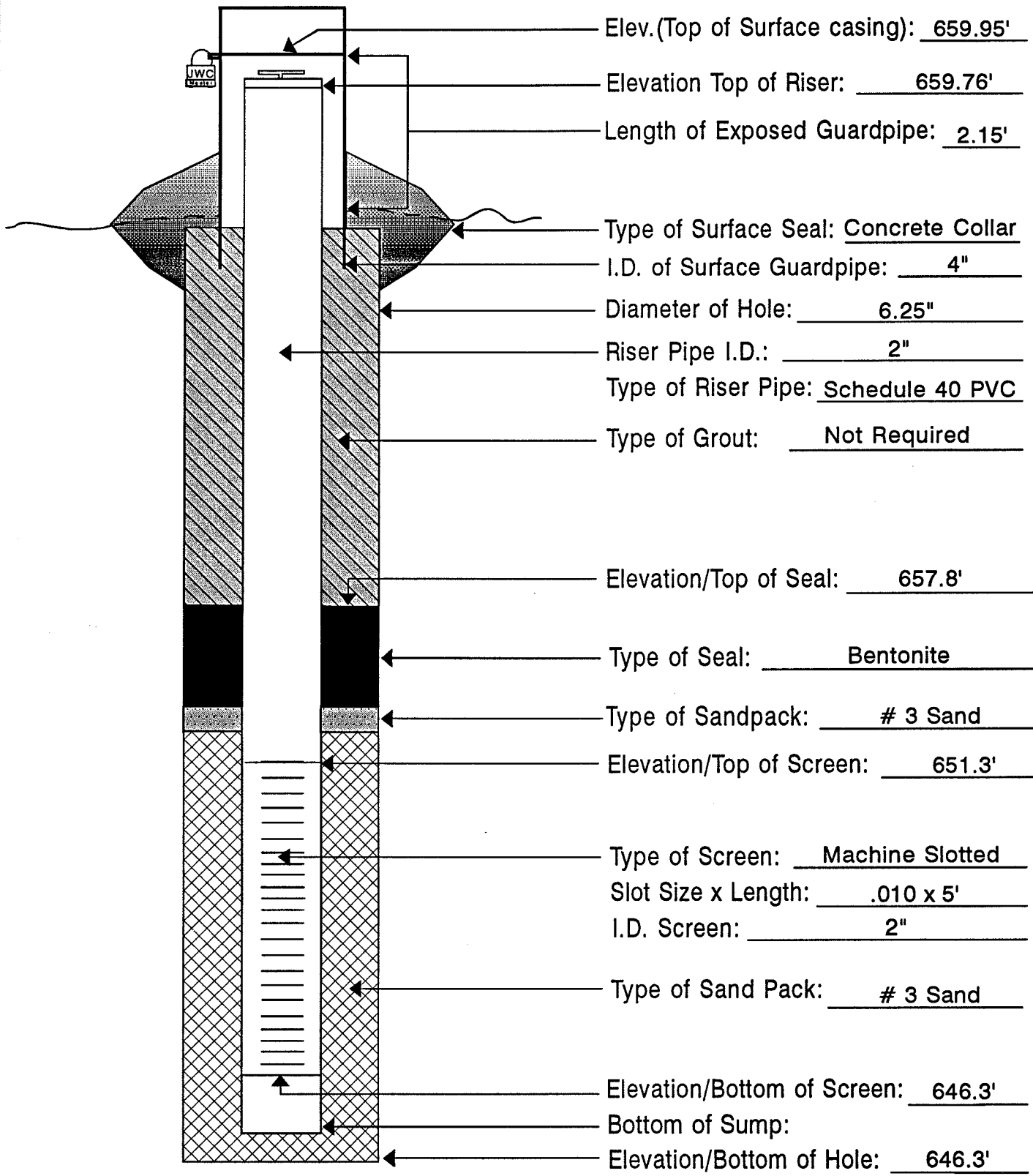
Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	Ash Landfill (MW-38D)	Drilling Method	Hol.Stem Auger/Air Rotary
Date	November 6, 1991	Development Method	Teflon Bailer



- Elev.(Top of Surface casing): 638.04'
- Elevation Top of Riser: 637.93'
- Length of Exposed Guardpipe: 2.64'
- Elevation/Ground Surface: 635.4'
- Type of Surface Seal: Concrete Collar
- I.D. of Surface Guardpipe: 4"
- Diameter of Hole: 10.25"
- Riser Pipe I.D.: 2"
- Type of Riser Pipe: Schedule 40 PVC
- Type of Grout: Cement/Bentonite
- PVC I.D. (Surface to Bedrock): 6"
- Type of Grout (outside PVC): Cem./Bent.
- Elevation/Depth Top of Seal: 630.5'
- Type of Seal: Bentonite
- Elevation/Depth Top of Screen: 625.7'
- Type of Screen: Machine Slotted
- Slot Size x Length: .010 x 20'
- I.D. Screen: 2"
- Type of Sand Pack: #3 Sand
- Diameter of Hole in Bedrock:
Core/Rock: 6.25"
- Elevation/Bottom of Screen: 605.7'
- Elevation/Bottom of Hole: 605.4'

OVERBURDEN MONITORING WELL

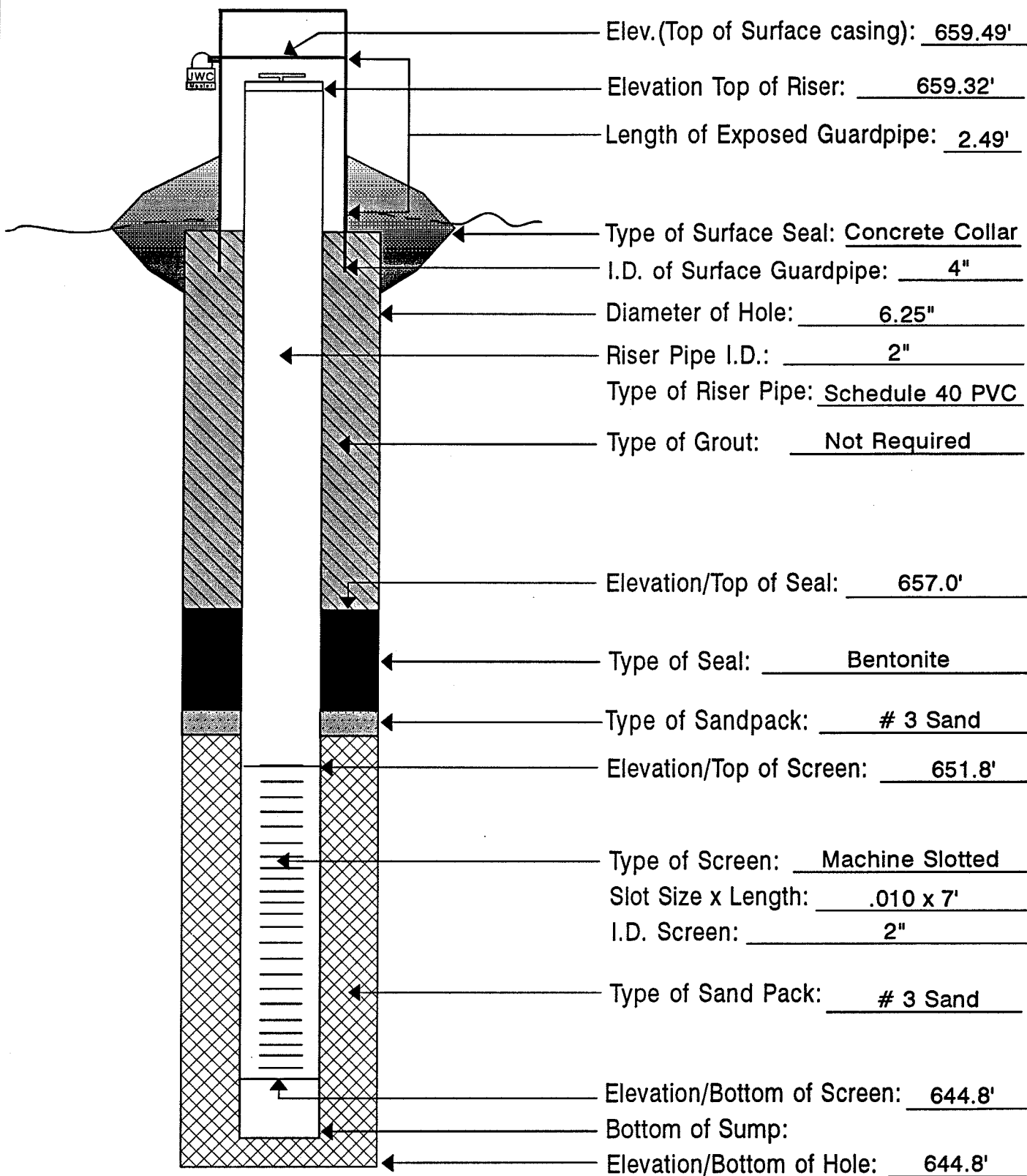
Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	Ash Landfill (MW-39)	Drilling Method	Hollow Stem Auger
Date	October 28, 1991	Development Method	Teflon Bailer



- Elev.(Top of Surface casing): 659.95'
- Elevation Top of Riser: 659.76'
- Length of Exposed Guardpipe: 2.15'
- Type of Surface Seal: Concrete Collar
- I.D. of Surface Guardpipe: 4"
- Diameter of Hole: 6.25"
- Riser Pipe I.D.: 2"
- Type of Riser Pipe: Schedule 40 PVC
- Type of Grout: Not Required
- Elevation/Top of Seal: 657.8'
- Type of Seal: Bentonite
- Type of Sandpack: # 3 Sand
- Elevation/Top of Screen: 651.3'
- Type of Screen: Machine Slotted
- Slot Size x Length: .010 x 5'
- I.D. Screen: 2"
- Type of Sand Pack: # 3 Sand
- Elevation/Bottom of Screen: 646.3'
- Bottom of Sump:
- Elevation/Bottom of Hole: 646.3'

OVERBURDEN MONITORING WELL

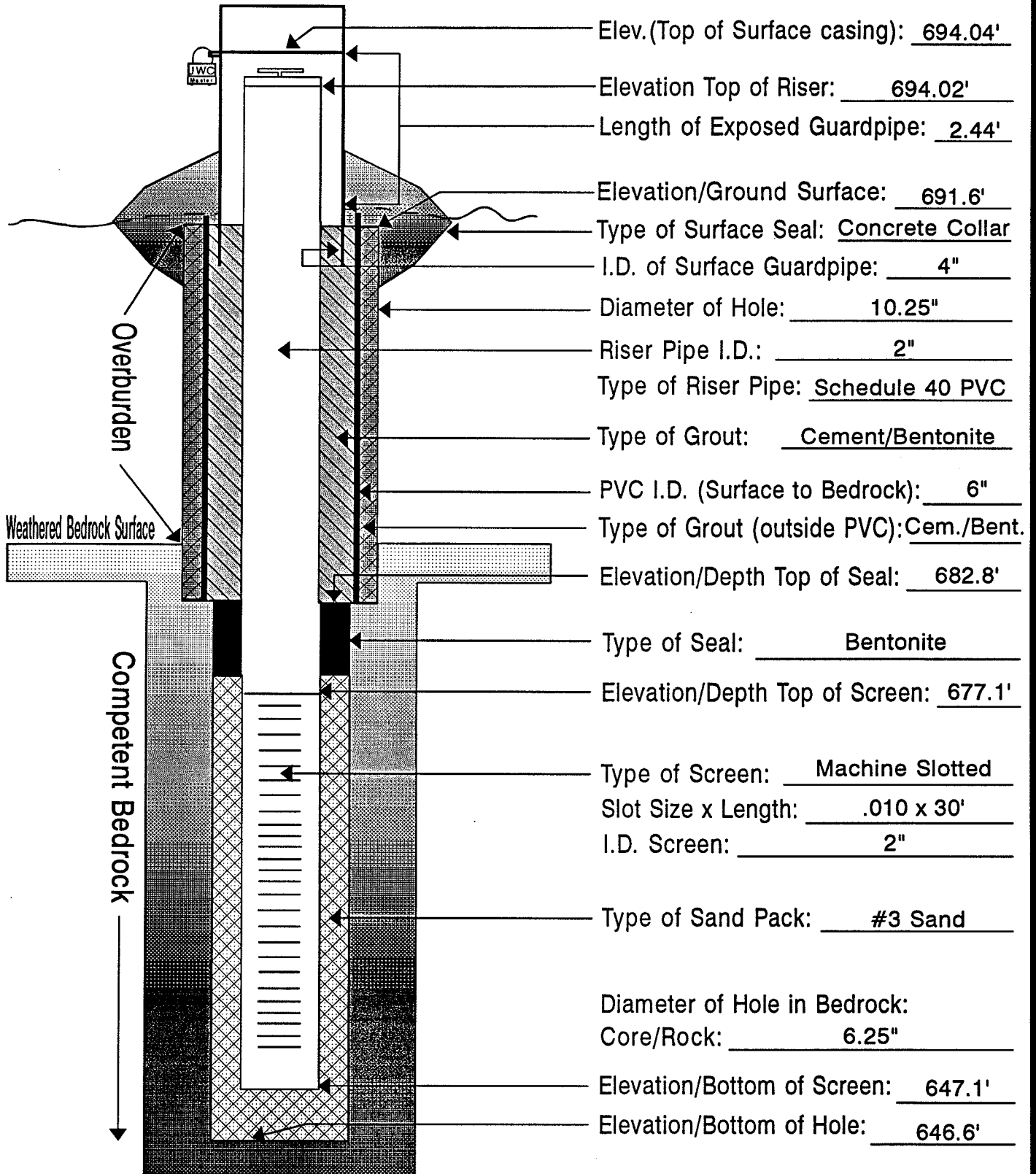
Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	Ash Landfill (MW-40)	Drilling Method	Hollow Stem Auger
Date	October 29, 1991	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 659.49'
 Elevation Top of Riser: 659.32'
 Length of Exposed Guardpipe: 2.49'
 Type of Surface Seal: Concrete Collar
 I.D. of Surface Guardpipe: 4"
 Diameter of Hole: 6.25"
 Riser Pipe I.D.: 2"
 Type of Riser Pipe: Schedule 40 PVC
 Type of Grout: Not Required
 Elevation/Top of Seal: 657.0'
 Type of Seal: Bentonite
 Type of Sandpack: # 3 Sand
 Elevation/Top of Screen: 651.8'
 Type of Screen: Machine Slotted
 Slot Size x Length: .010 x 7'
 I.D. Screen: 2"
 Type of Sand Pack: # 3 Sand
 Elevation/Bottom of Screen: 644.8'
 Bottom of Sump:
 Elevation/Bottom of Hole: 644.8'

BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	Ash Landfill (MW-41D)	Drilling Method	Hol.Stem Auger/Air Rotary
Date	November 6, 1991	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 694.04'

Elevation Top of Riser: 694.02'

Length of Exposed Guardpipe: 2.44'

Elevation/Ground Surface: 691.6'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10.25"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Cement/Bentonite

PVC I.D. (Surface to Bedrock): 6"

Type of Grout (outside PVC): Cem./Bent.

Elevation/Depth Top of Seal: 682.8'

Type of Seal: Bentonite

Elevation/Depth Top of Screen: 677.1'

Type of Screen: Machine Slotted

Slot Size x Length: .010 x 30'

I.D. Screen: 2"

Type of Sand Pack: #3 Sand

Diameter of Hole in Bedrock:

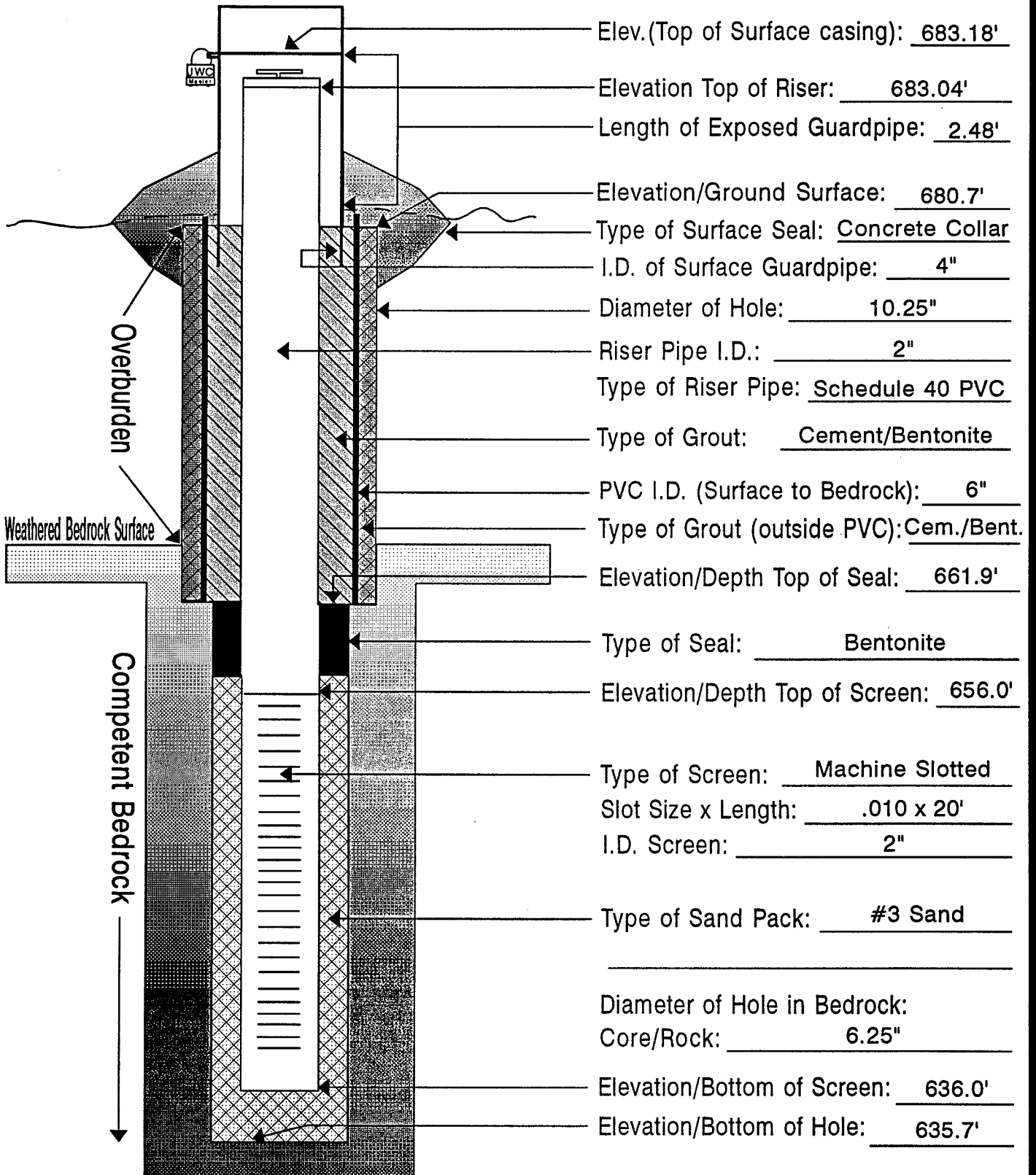
Core/Rock: 6.25"

Elevation/Bottom of Screen: 647.1'

Elevation/Bottom of Hole: 646.6'

BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	Ash Landfill (MW-42D)	Drilling Method	Hol.Stem Auger/Air Rotary
Date	November 8, 1991	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 683.18'

Elevation Top of Riser: 683.04'

Length of Exposed Guardpipe: 2.48'

Elevation/Ground Surface: 680.7'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10.25"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Cement/Bentonite

PVC I.D. (Surface to Bedrock): 6"

Type of Grout (outside PVC): Cem./Bent.

Elevation/Depth Top of Seal: 661.9'

Type of Seal: Bentonite

Elevation/Depth Top of Screen: 656.0'

Type of Screen: Machine Slotted

Slot Size x Length: .010 x 20'

I.D. Screen: 2"

Type of Sand Pack: #3 Sand

Diameter of Hole in Bedrock:

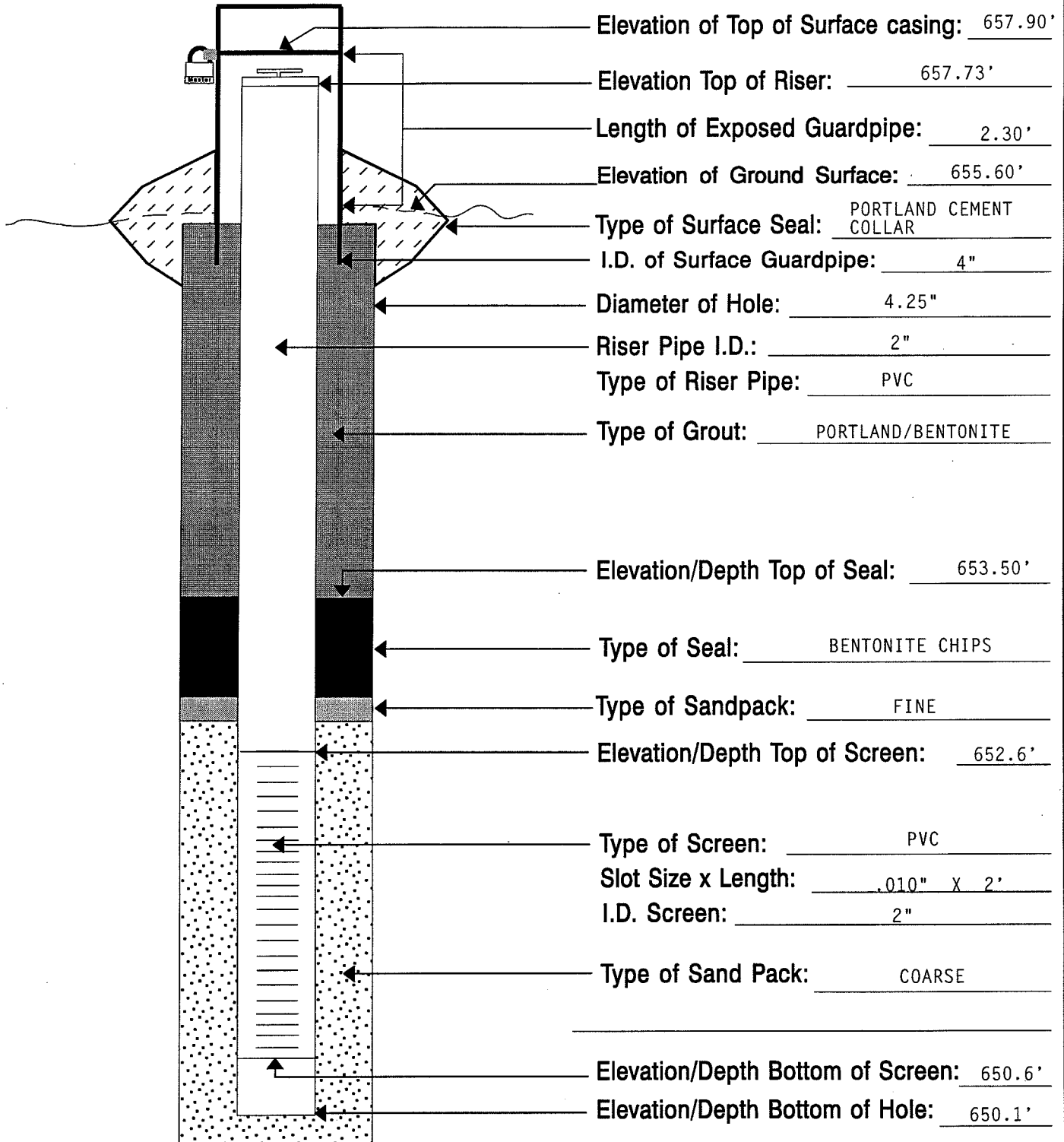
Core/Rock: 6.25"

Elevation/Bottom of Screen: 636.0'

Elevation/Bottom of Hole: 635.7'

OVERBURDEN MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	AMERICAN AUGER
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA
DATE	5/3/93	WELL NAME	MW-43



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: 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: 653.50'

Type of Seal: BENTONITE CHIPS

Type of Sandpack: FINE

Elevation/Depth Top of Screen: 652.6'

Type of Screen: PVC

Slot Size x Length: .010" X 2'

I.D. Screen: 2"

Type of Sand Pack: COARSE

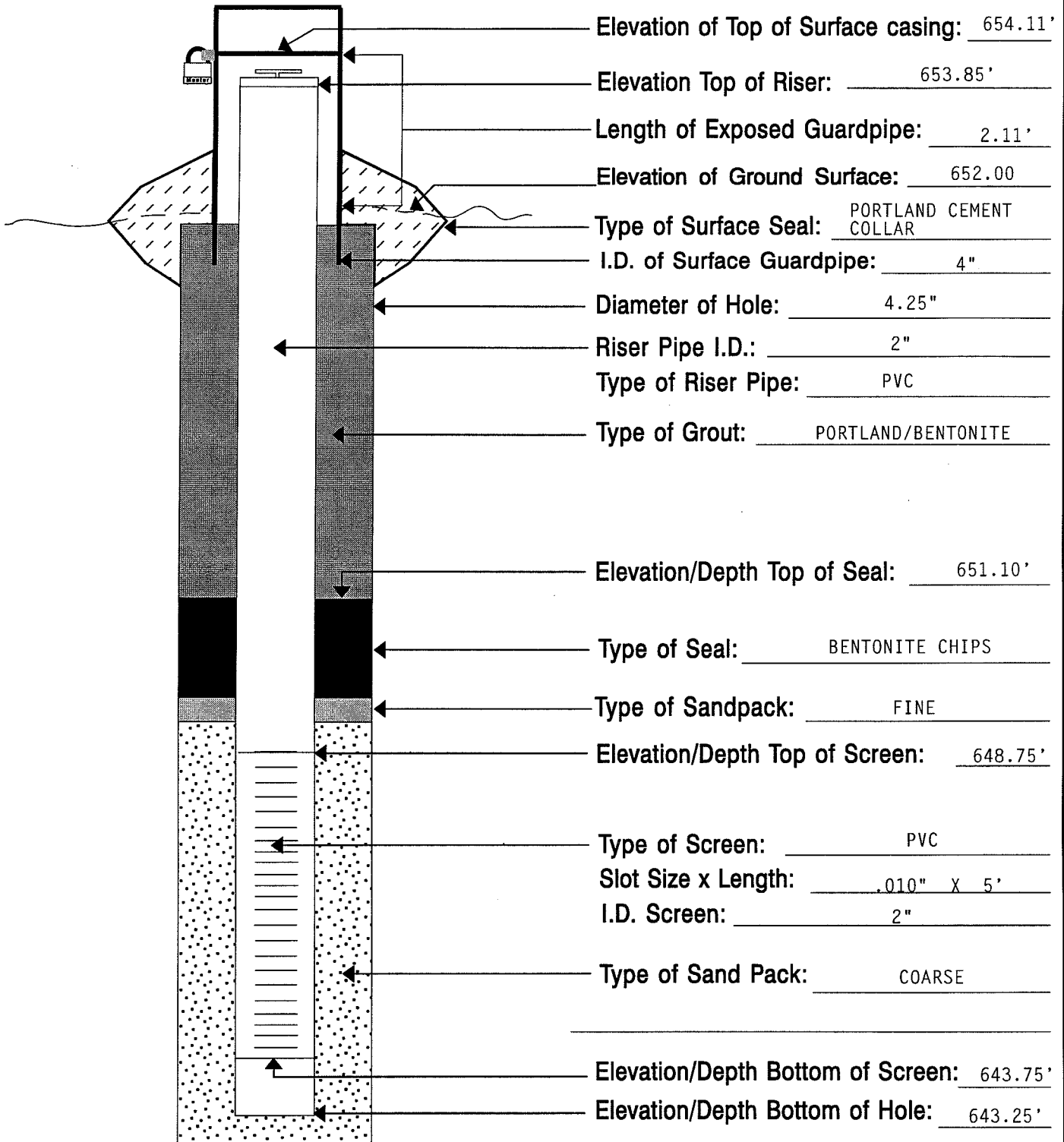
Elevation/Depth Bottom of Screen: 650.6'

Elevation/Depth Bottom of Hole: 650.1'

ALL ELEVATIONS RELATIVE TO MSL

OVERBURDEN MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	AMERICAN AUGER
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA
DATE	5/3/93	WELL NAME	MW-44



Elevation of Top of Surface casing: 654.11'

Elevation Top of Riser: 653.85'

Length of Exposed Guardpipe: 2.11'

Elevation of Ground Surface: 652.00

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: 651.10'

Type of Seal: BENTONITE CHIPS

Type of Sandpack: FINE

Elevation/Depth Top of Screen: 648.75'

Type of Screen: PVC

Slot Size x Length: .010" X 5'

I.D. Screen: 2"

Type of Sand Pack: COARSE

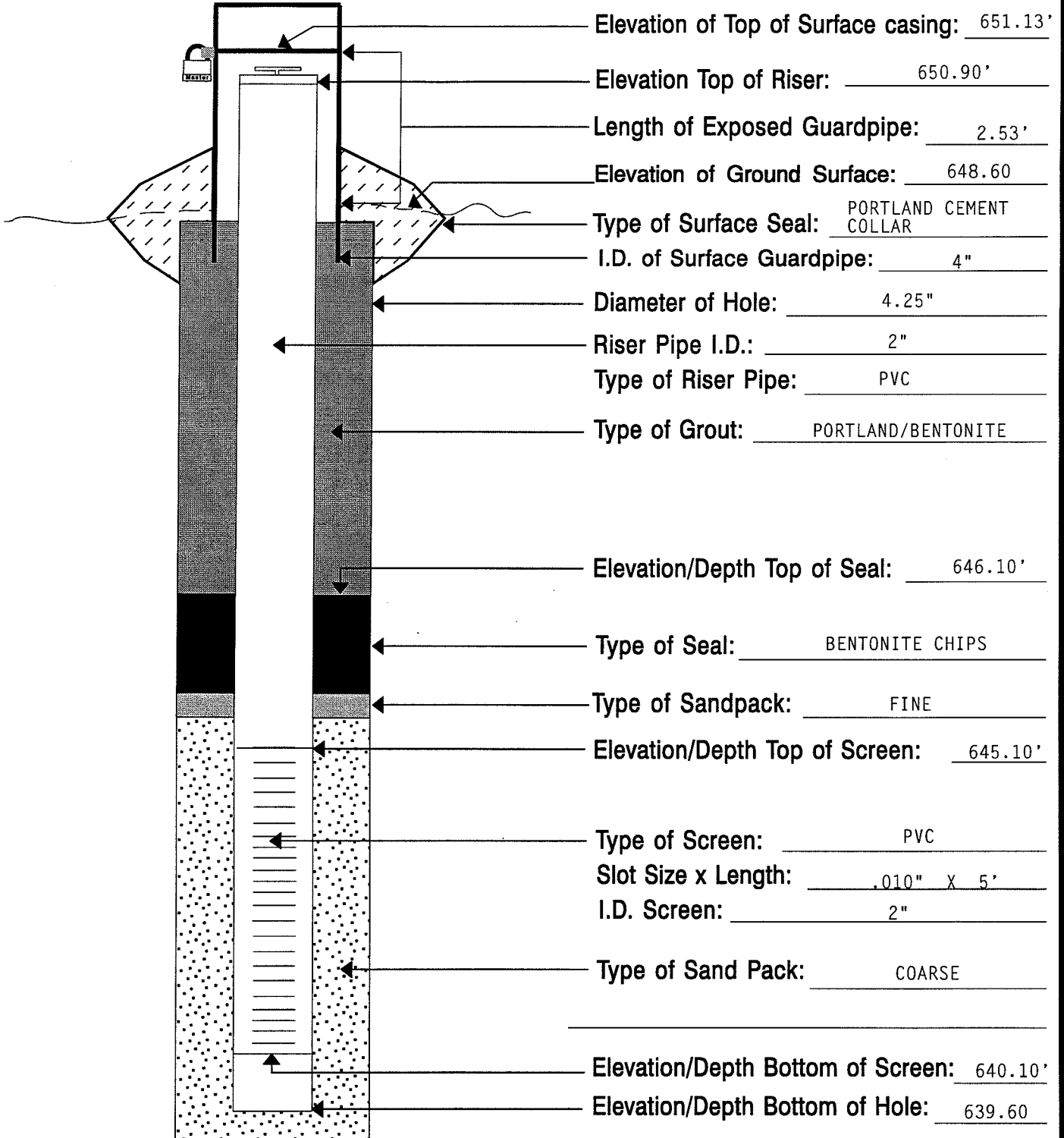
Elevation/Depth Bottom of Screen: 643.75'

Elevation/Depth Bottom of Hole: 643.25'

ALL ELEVATIONS RELATIVE TO MSL

OVERBURDEN MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	AMERICAN AUGER
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA
DATE	5/5/93	WELL NAME	MW-45



Elevation of Top of Surface casing: 651.13'

Elevation Top of Riser: 650.90'

Length of Exposed Guardpipe: 2.53'

Elevation of Ground Surface: 648.60

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: 646.10'

Type of Seal: BENTONITE CHIPS

Type of Sandpack: FINE

Elevation/Depth Top of Screen: 645.10'

Type of Screen: PVC

Slot Size x Length: .010" X 5'

I.D. Screen: 2"

Type of Sand Pack: COARSE

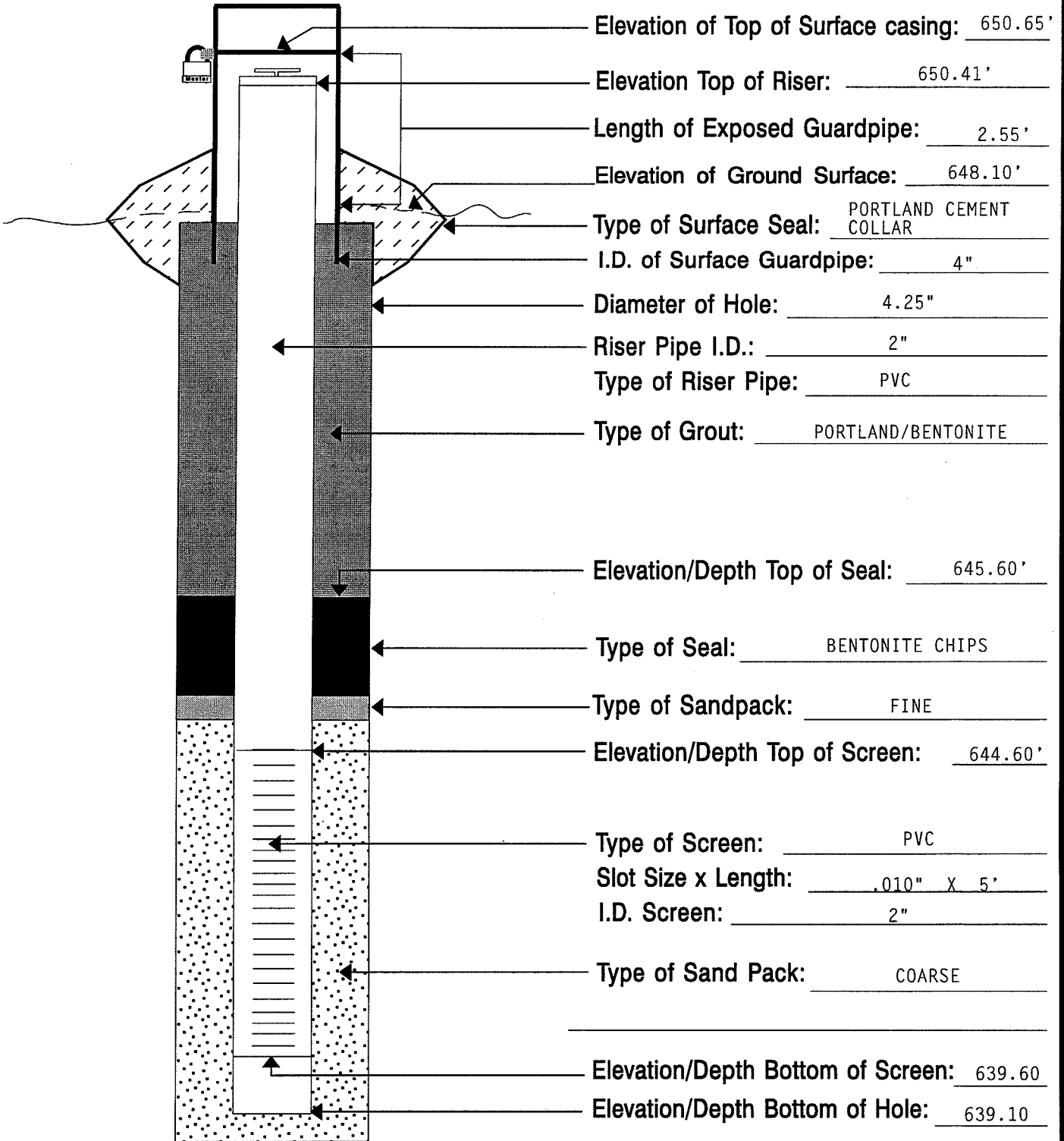
Elevation/Depth Bottom of Screen: 640.10'

Elevation/Depth Bottom of Hole: 639.60

ALL ELEVATIONS RELATIVE TO MSL

OVERBURDEN MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	AMERICAN AUGER
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA
DATE	5/5/93	WELL NAME	MW-46



Elevation of Top of Surface casing: 650.65'

Elevation Top of Riser: 650.41'

Length of Exposed Guardpipe: 2.55'

Elevation of Ground Surface: 648.10'

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: 645.60'

Type of Seal: BENTONITE CHIPS

Type of Sandpack: FINE

Elevation/Depth Top of Screen: 644.60'

Type of Screen: PVC

Slot Size x Length: .010" X 5'

I.D. Screen: 2"

Type of Sand Pack: COARSE

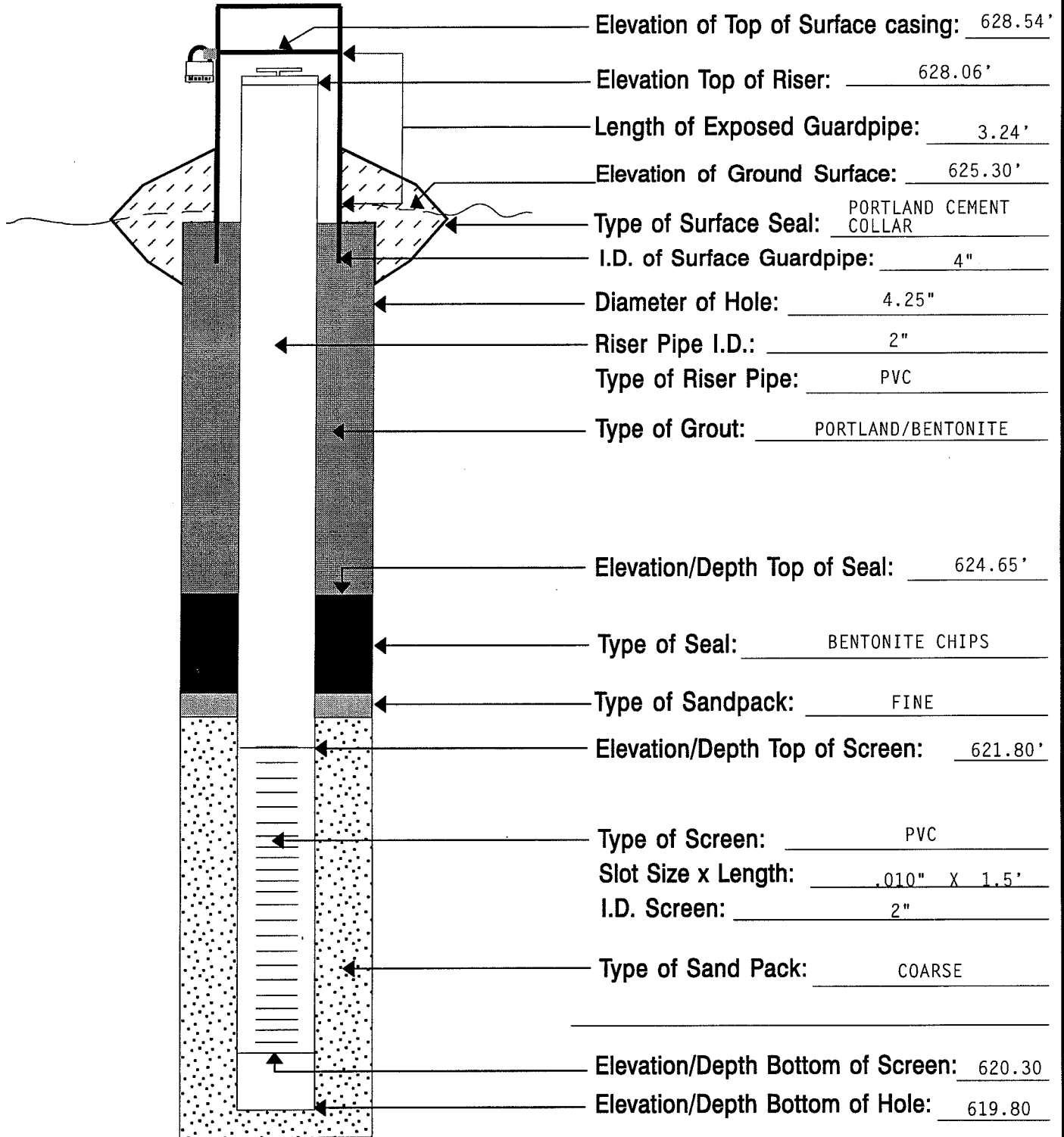
Elevation/Depth Bottom of Screen: 639.60

Elevation/Depth Bottom of Hole: 639.10

ALL ELEVATIONS RELATIVE TO MSL

OVERBURDEN MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	AMERICAN AUGER
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA
DATE	5/11/93	WELL NAME	MW-47



Elevation of Top of Surface casing: 628.54'

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

Type of Grout: PORTLAND/BENTONITE

Elevation/Depth Top of Seal: 624.65'

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

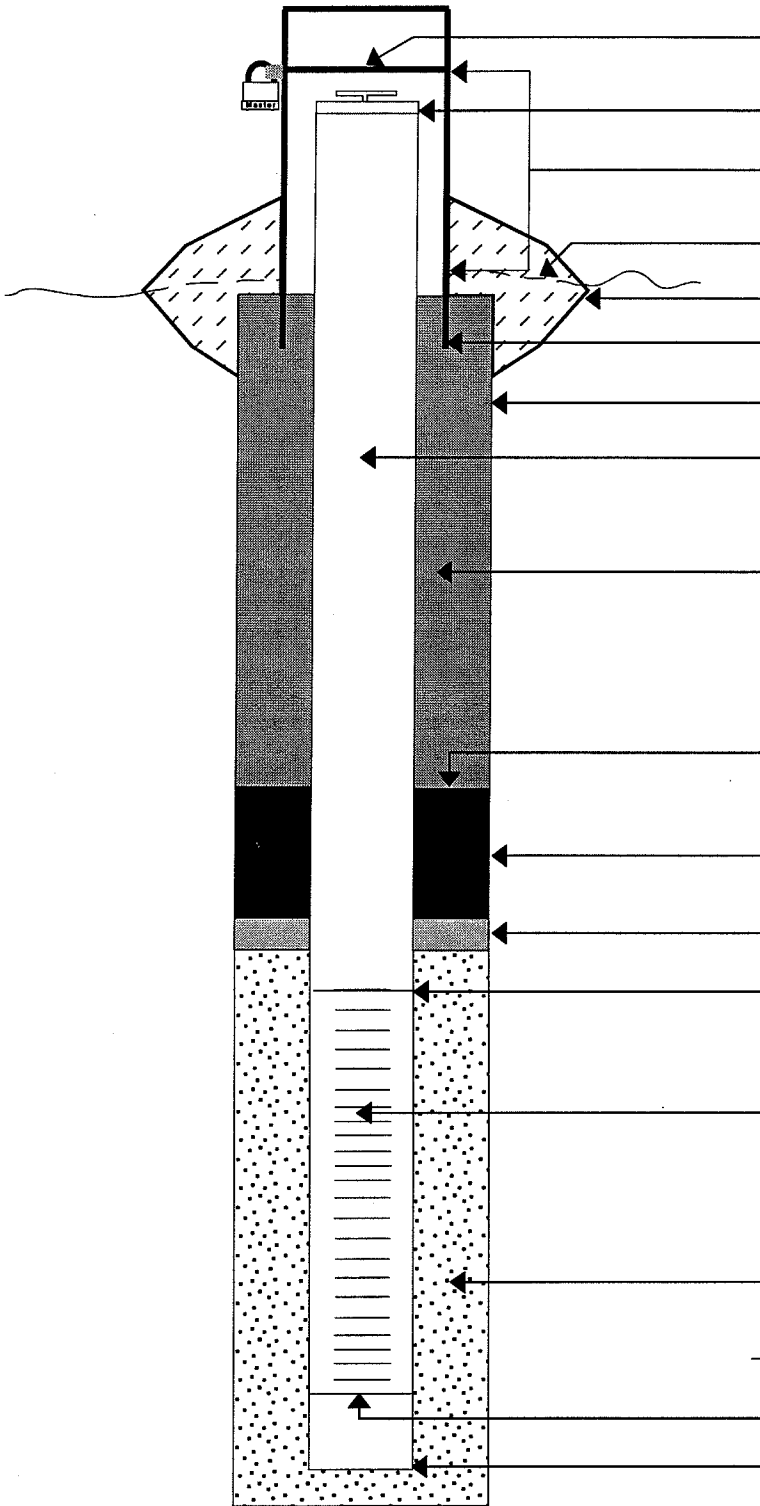
Elevation/Depth Bottom of Screen: 620.30

Elevation/Depth Bottom of Hole: 619.80

ALL ELEVATIONS RELATIVE TO MSL

OVERBURDEN MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	AMERICAN AUGER
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA
DATE	5/4/93	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: .010" X 5'

I.D. Screen: 2"

Type of Sand Pack: COARSE

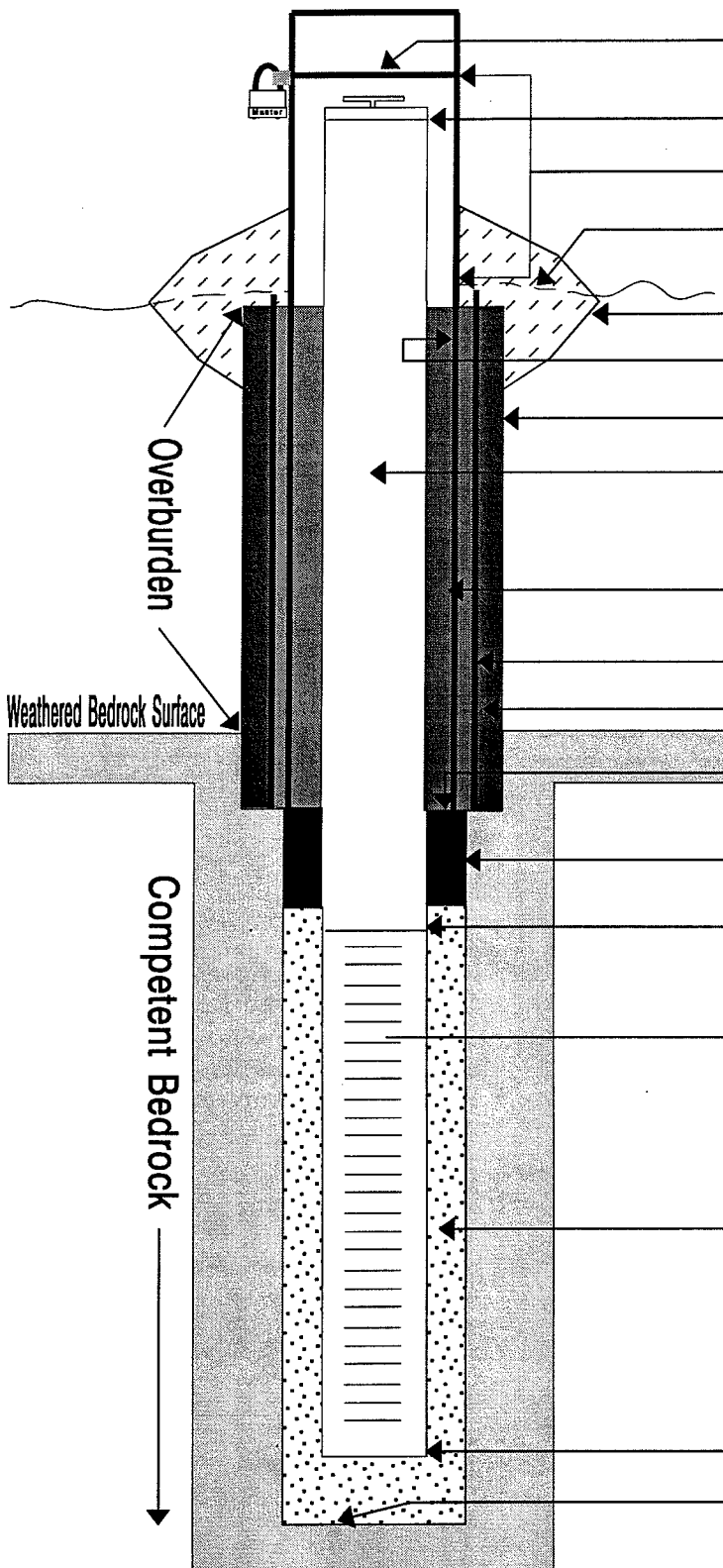
Elevation/Depth Bottom of Screen: 637.50'

Elevation/Depth Bottom of Hole: 637.00'

ALL ELEVATIONS RELATIVE TO MSL

BEDROCK MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	AMERICAN AUGER
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA
DATE	5-5-93	WELL NAME	MW-49D



Elev.(Top of Surface casing): 650.64'

Elevation Top of Riser: 650.50'

Length of Exposed Guardpipe: 2.49'

Elevation/Ground Surface: 648.20'

Type of Surface Seal: PORTLAND CEMENT COLLAR

I.D. of Surface Guardpipe: 6"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: PVC

Type of Grout: PORTLAND/BENTONITE

Steel I.D. (Surface to Bedrock): 6"

Type of Grout: PORTLAND/BENTONITE

Elevation/Depth Top of Seal: 639.20'

Type of Seal: BENTONITE CHIPS

Elevation/Depth Top of Screen: 632.70'

Type of Screen: PVC

Slot Size x Length: .010" X 19

I.D. Screen: 2"

Type of Sand Pack: COARSE

Diameter of Hole in Bedrock: 4"

Core/Rock: 4"

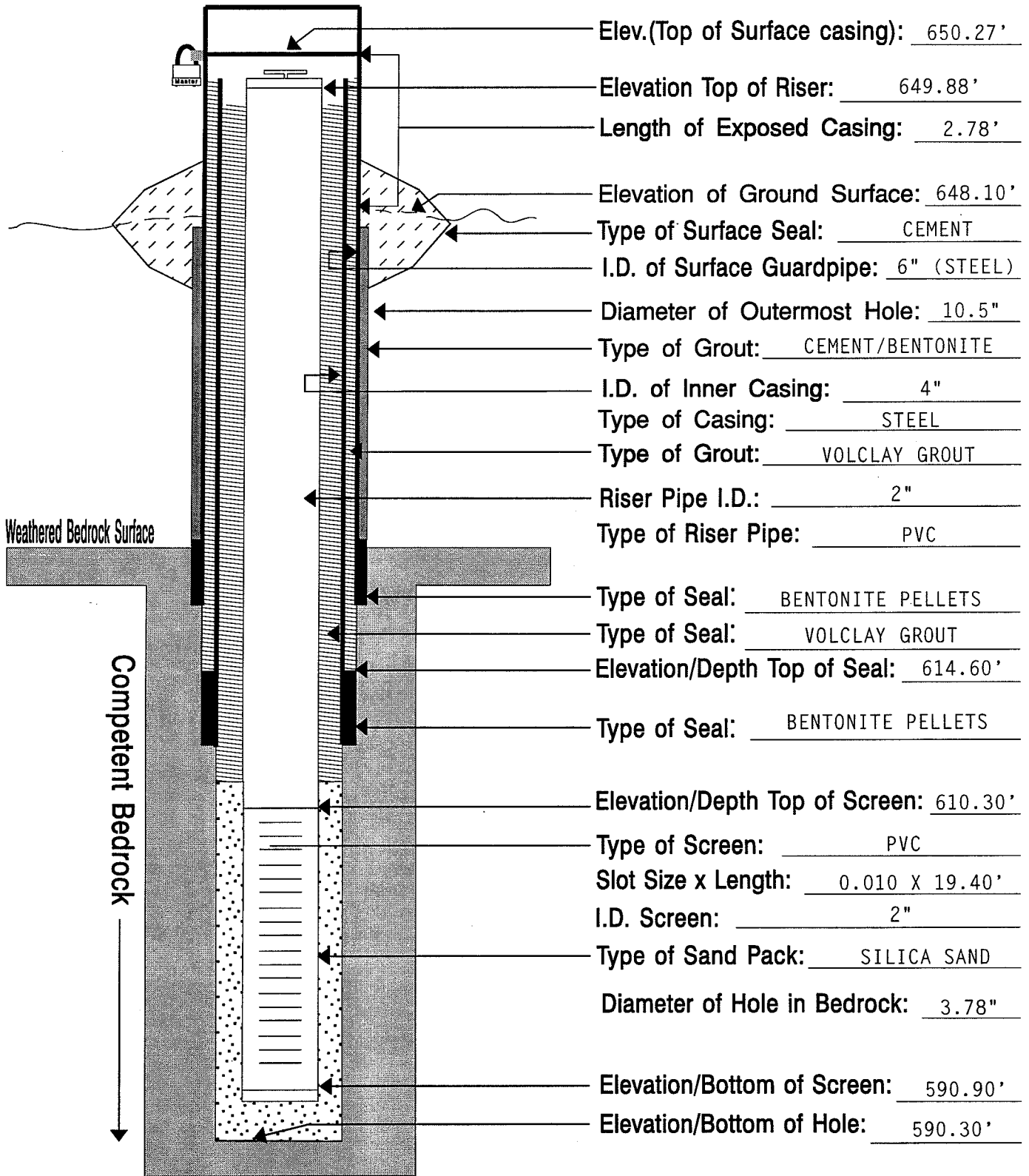
Elevation/Bottom of Screen: 613.70'

Elevation/Bottom of Hole: 612.70'

ALL ELEVATIONS RELATIVE TO MSL

BEDROCK MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	MAHER ENVIRONMENTAL
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA AND CORING
DATE	26 MAY 1993	WELL NAME	MW-50D



Elev.(Top of Surface casing): 650.27'

Elevation Top of Riser: 649.88'

Length of Exposed Casing: 2.78'

Elevation of Ground Surface: 648.10'

Type of Surface Seal: CEMENT

I.D. of Surface Guardpipe: 6" (STEEL)

Diameter of Outermost Hole: 10.5"

Type of Grout: CEMENT/BENTONITE

I.D. of Inner Casing: 4"

Type of Casing: STEEL

Type of Grout: VOLCLAY GROUT

Riser Pipe I.D.: 2"

Type of Riser Pipe: PVC

Type of Seal: BENTONITE PELLETS

Type of Seal: VOLCLAY GROUT

Elevation/Depth Top of Seal: 614.60'

Type of Seal: BENTONITE PELLETS

Elevation/Depth Top of Screen: 610.30'

Type of Screen: PVC

Slot Size x Length: 0.010 X 19.40'

I.D. Screen: 2"

Type of Sand Pack: SILICA SAND

Diameter of Hole in Bedrock: 3.78"

Elevation/Bottom of Screen: 590.90'

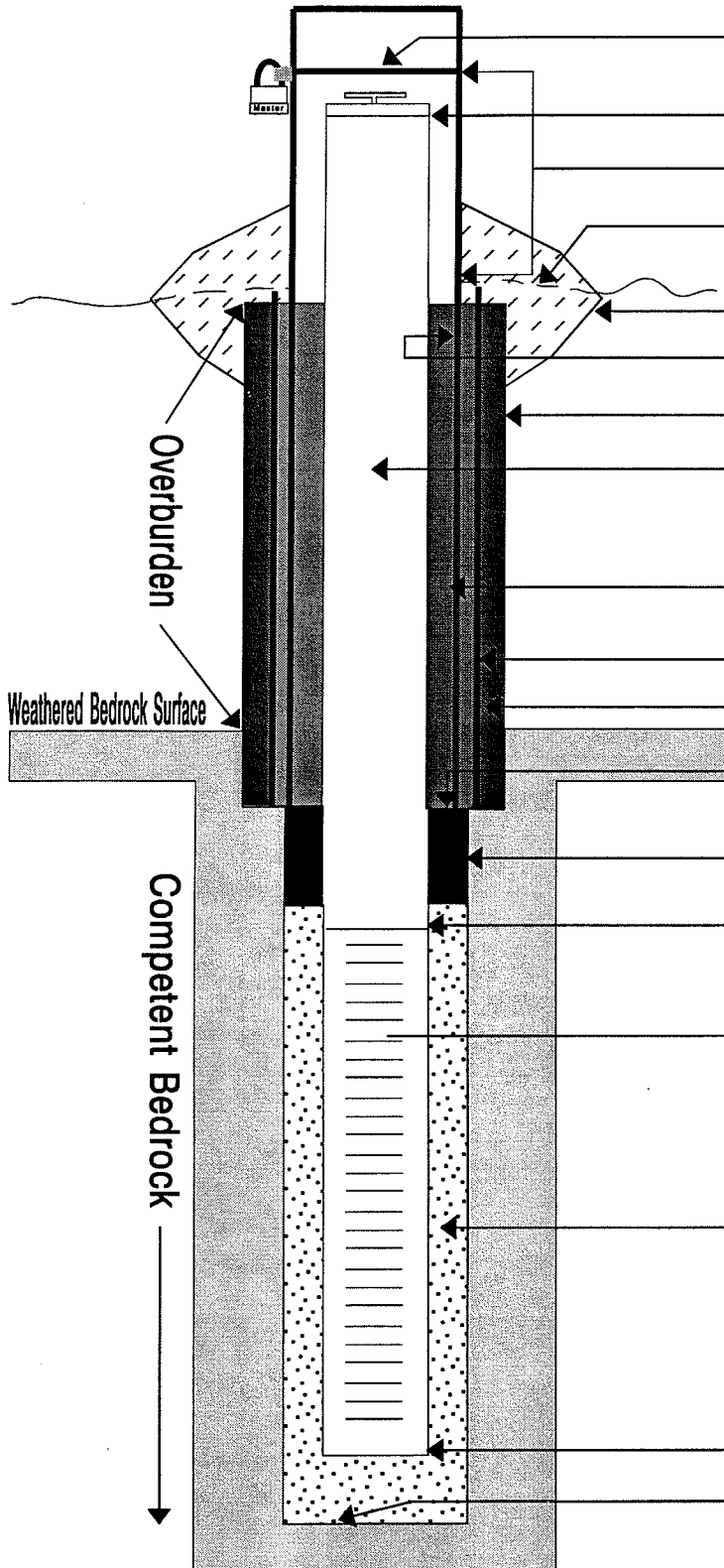
Elevation/Bottom of Hole: 590.30'

Weathered Bedrock Surface

Competent Bedrock

BEDROCK MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	AMERICAN AUGER
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA
DATE	5-10-93	WELL NAME	MW-51D



Elev.(Top of Surface casing): 628.64'

Elevation Top of Riser: 628.24'

Length of Exposed Guardpipe: 3.04'

Elevation/Ground Surface: 625.60'

Type of Surface Seal: PORTLAND CEMENT COLLAR

I.D. of Surface Guardpipe: 6"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: PVC

Type of Grout: PORTLAND/BENTONITE

Steel I.D. (Surface to Bedrock): 6"

Type of Grout: PORTLAND/BENTONITE

Elevation/Depth Top of Seal: 619.10'

Type of Seal: BENTONITE CHIPS

Elevation/Depth Top of Screen: 612.30'

Type of Screen: PVC

Slot Size x Length: .010" X 19

I.D. Screen: 2"

Type of Sand Pack: COARSE

Diameter of Hole in Bedrock:
Core/Rock: 4"

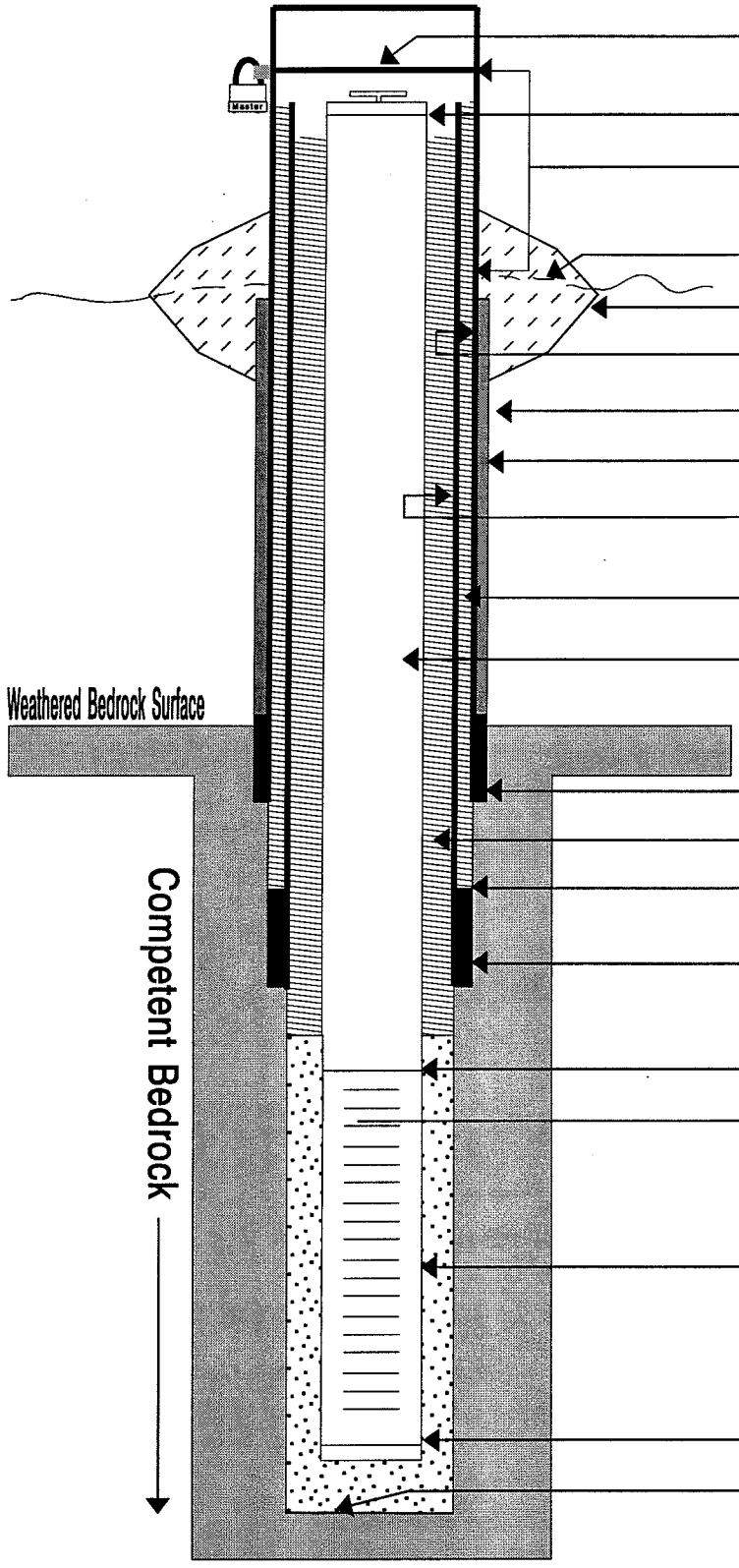
Elevation/Bottom of Screen: 593.30'

Elevation/Bottom of Hole: 592.30'

ALL ELEVATIONS RELATIVE TO MSL

BEDROCK MONITORING WELL

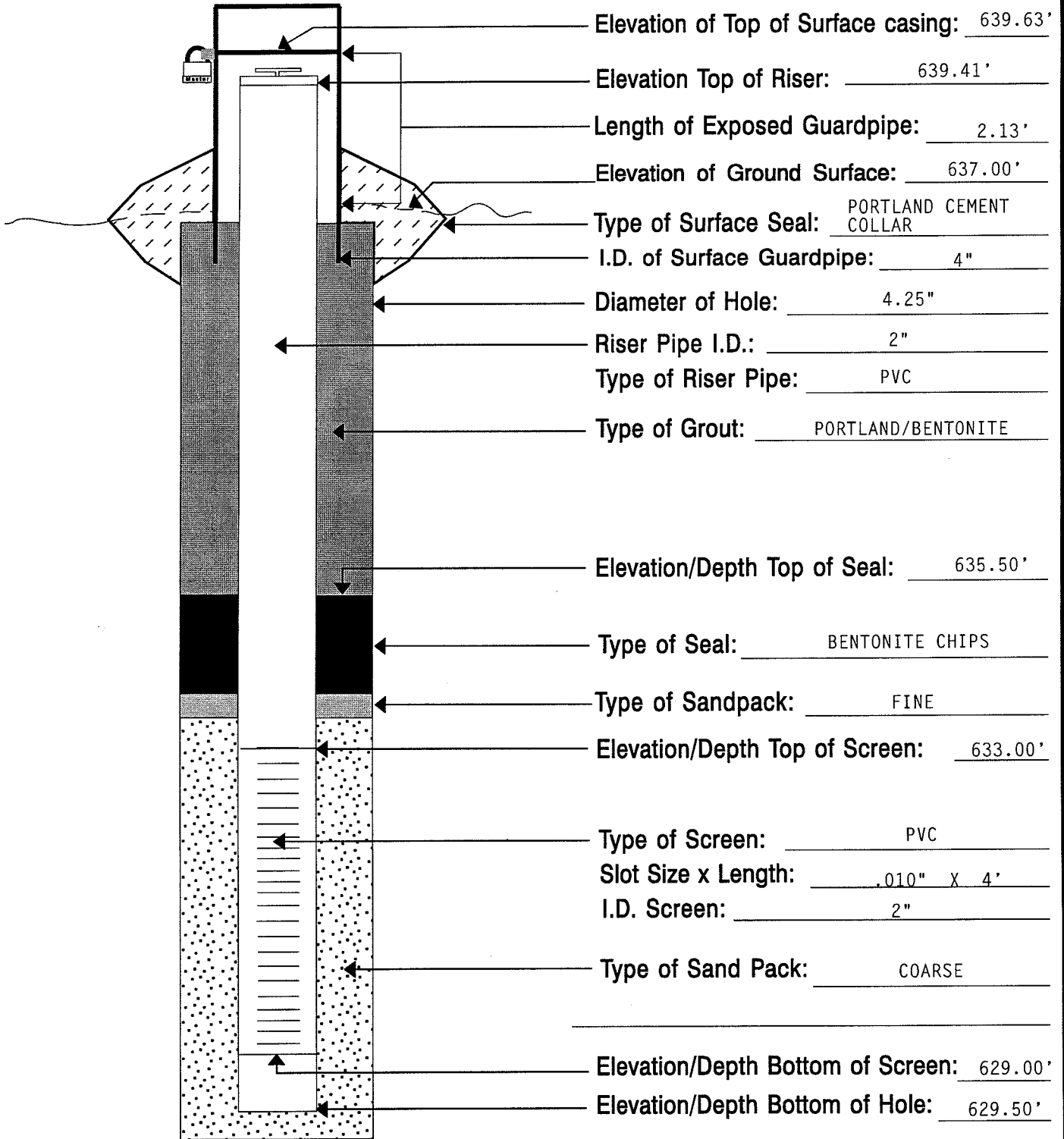
PROJECT	SENECA ARMY DEPOT	DRILLER	MAHER ENVIRONMENTAL
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA AND CORING
DATE	8 JUNE 1993	WELL NAME	MW-52D



- Elev.(Top of Surface casing): 626.70'
- Elevation Top of Riser: 626.35'
- Length of Exposed Casing: 1.40'
- Elevation of Ground Surface: 625.30'
- Type of Surface Seal: CEMENT
- I.D. of Surface Guardpipe: 6" (STEEL)
- Diameter of Outermost Hole: 10.5"
- Type of Grout: CEMENT/BENTONITE
- I.D. of Inner Casing: 4"
- Type of Casing: STEEL
- Type of Grout: VOLCLAY GROUT
- Riser Pipe I.D.: 2"
- Type of Riser Pipe: PVC
- Type of Seal: BENTONITE PELLETS
- Type of Seal: VOLCLAY GROUT
- Elevation/Depth Top of Seal: 593.10'
- Type of Seal: BENTONITE PELLETS
- Elevation/Depth Top of Screen: 588.80'
- Type of Screen: PVC
- Slot Size x Length: 0.010 X 19.4'
- I.D. Screen: 2"
- Type of Sand Pack: SILICA SAND
- Diameter of Hole in Bedrock: 3.78"
- Elevation/Bottom of Screen: 569.40'
- Elevation/Bottom of Hole: 568.60'

OVERBURDEN MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	AMERICAN AUGER
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA
DATE	5/6/93	WELL NAME	MW-53



Elevation of Top of Surface casing: 639.63'

Elevation Top of Riser: 639.41'

Length of Exposed Guardpipe: 2.13'

Elevation of Ground Surface: 637.00'

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: 635.50'

Type of Seal: BENTONITE CHIPS

Type of Sandpack: FINE

Elevation/Depth Top of Screen: 633.00'

Type of Screen: PVC

Slot Size x Length: .010" X 4'

I.D. Screen: 2"

Type of Sand Pack: COARSE

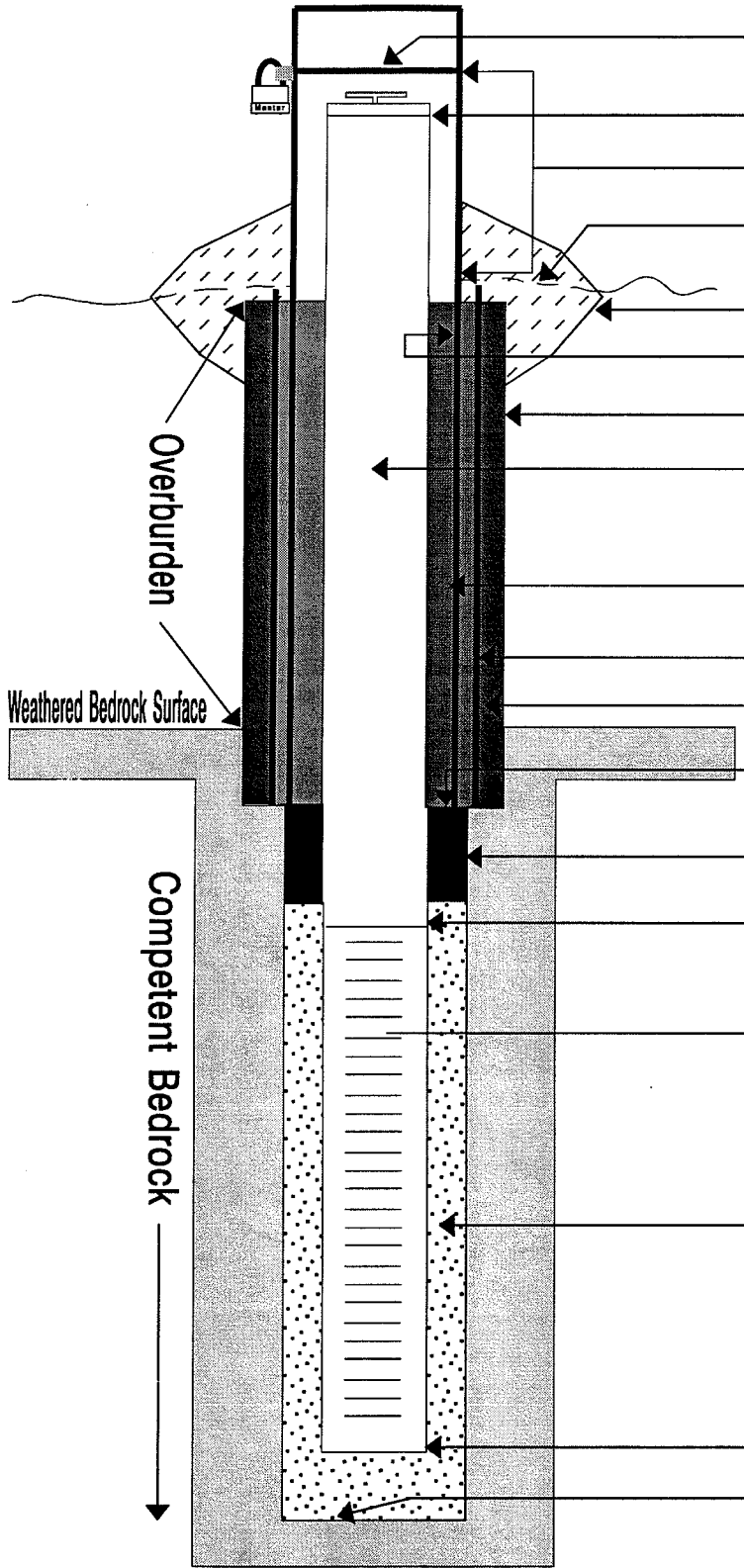
Elevation/Depth Bottom of Screen: 629.00'

Elevation/Depth Bottom of Hole: 629.50'

ALL ELEVATIONS RELATIVE TO MSL

BEDROCK MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	AMERICAN AUGER
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA
DATE	5-18-93	WELL NAME	MW-54D

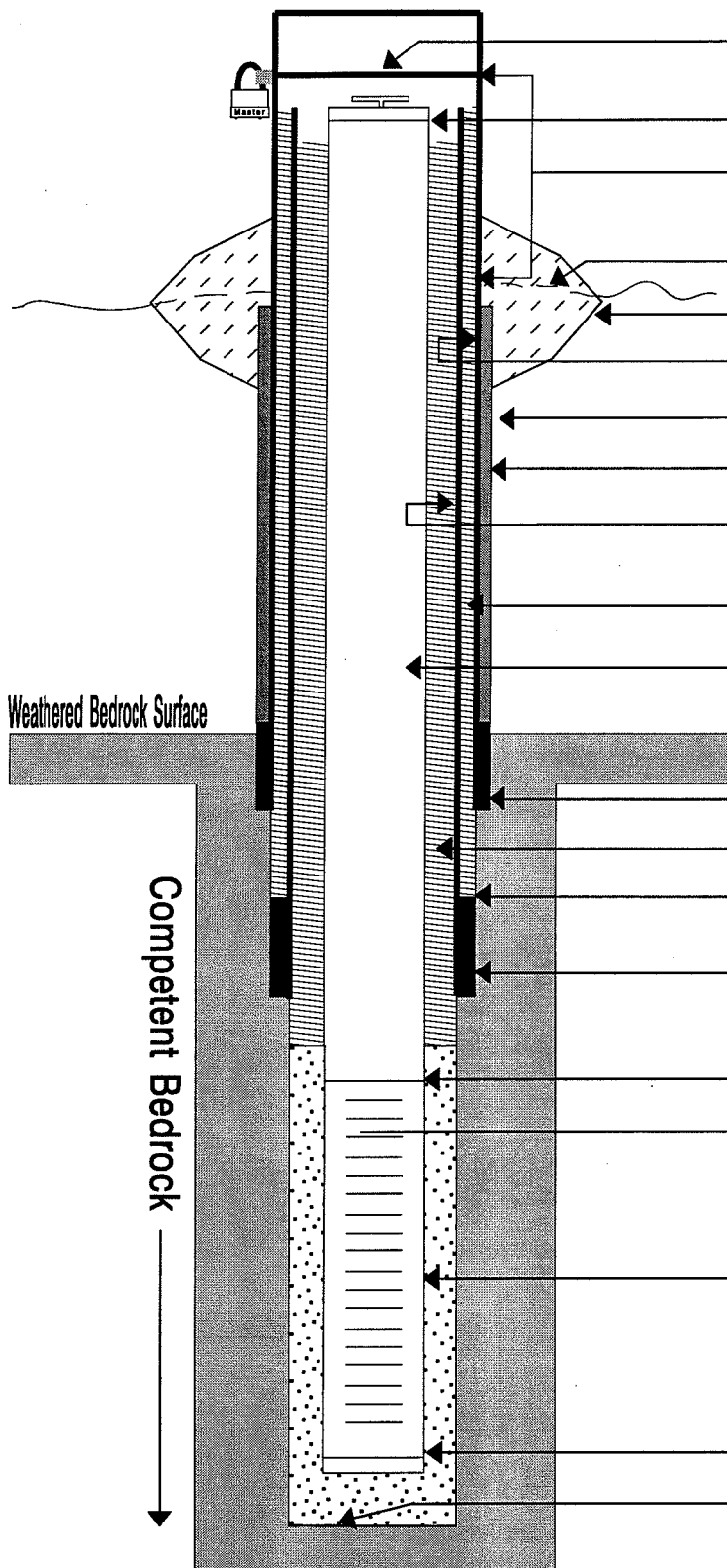


- Elev.(Top of Surface casing): 639.34'
- Elevation Top of Riser: 639.00'
- Length of Exposed Guardpipe: 2.44'
- Elevation/Ground Surface: 636.90'
- Type of Surface Seal: PORTLAND CEMENT COLLAR
- I.D. of Surface Guardpipe: 6"
- Diameter of Hole: 10"
- Riser Pipe I.D.: 2"
- Type of Riser Pipe: PVC
- Type of Grout: PORTLAND/BENTONITE
- Steel I.D. (Surface to Bedrock): 6"
- Type of Grout: PORTLAND/BENTONITE
- Elevation/Depth Top of Seal: 629.90'
- Type of Seal: BENTONITE CHIPS
- Elevation/Depth Top of Screen: 623.60'
- Type of Screen: PVC
- Slot Size x Length: .010" X 19
- I.D. Screen: 2"
- Type of Sand Pack: COARSE
- Diameter of Hole in Bedrock: 4"
- Core/Rock: 4"
- Elevation/Bottom of Screen: 588.10'
- Elevation/Bottom of Hole: 587.10'

ALL ELEVATIONS RELATIVE TO MSL

BEDROCK MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	MAHER ENVIRONMENTAL
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA AND CORING
DATE	2 JUNE 1993	WELL NAME	MW-55D



Elev.(Top of Surface casing): 639.43'

Elevation Top of Riser: 639.16'

Length of Exposed Casing: 2.63'

Elevation of Ground Surface: 636.80'

Type of Surface Seal: CEMENT

I.D. of Surface Guardpipe: 6" (STEEL)

Diameter of Outermost Hole: 10.5"

Type of Grout: CEMENT/BENTONITE

I.D. of Inner Casing: 4"

Type of Casing: STEEL

Type of Grout: VOLCLAY GROUT

Riser Pipe I.D.: 2"

Type of Riser Pipe: PVC

Type of Seal: BENTONITE PELLETS

Type of Seal: VOLCLAY GROUT

Elevation/Depth Top of Seal: 603.20'

Type of Seal: BENTONITE PELLETS

Elevation/Depth Top of Screen: 601.20'

Type of Screen: PVC

Slot Size x Length: 0.010 X 20'

I.D. Screen: 2"

Type of Sand Pack: SILICA SAND

Diameter of Hole in Bedrock: 3.78"

Elevation/Bottom of Screen: 581.20'

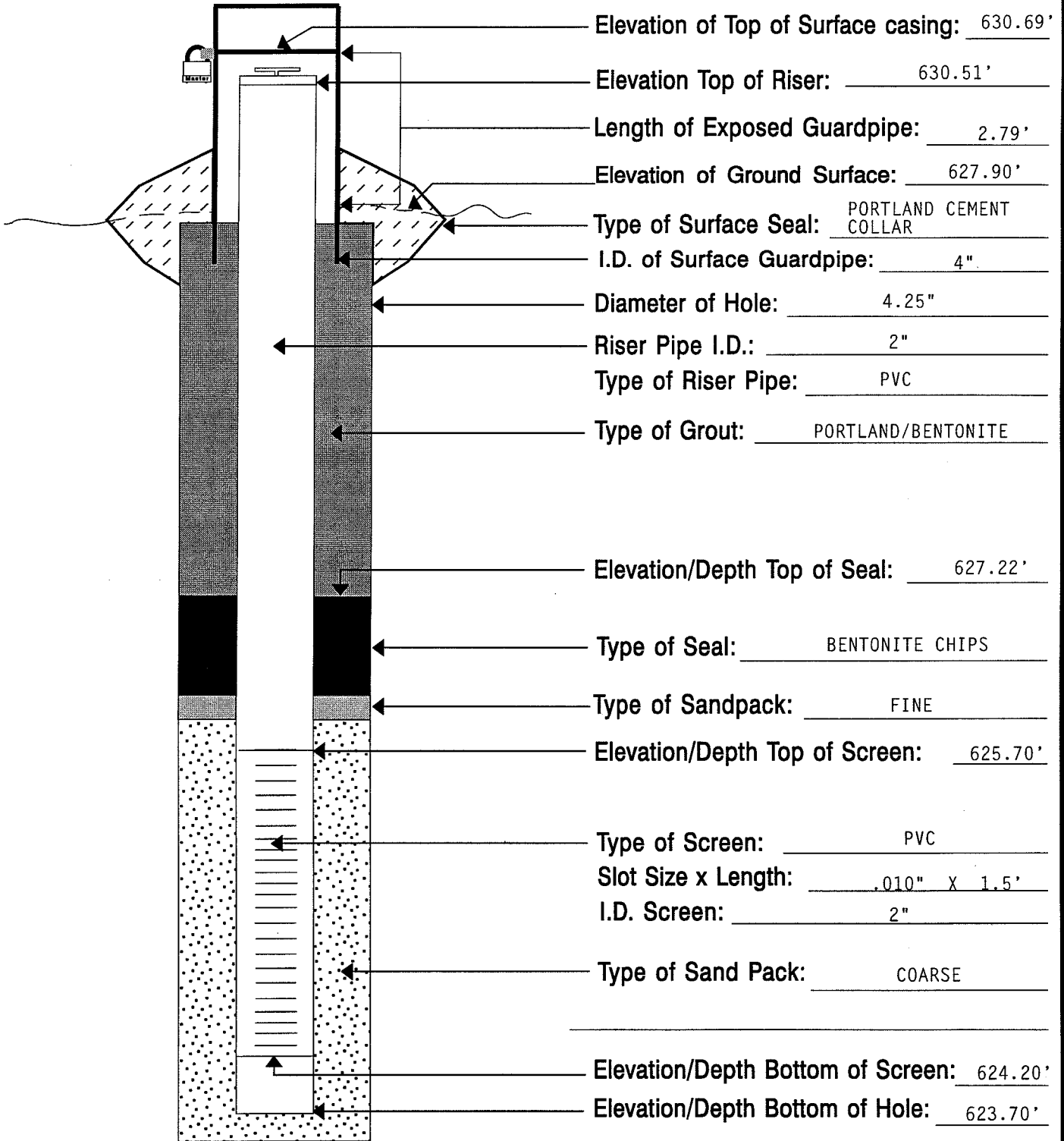
Elevation/Bottom of Hole: 580.90'

Weathered Bedrock Surface

Competent Bedrock

OVERBURDEN MONITORING WELL

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



Elevation of Top of Surface casing: 630.69'

Elevation Top of Riser: 630.51'

Length of Exposed Guardpipe: 2.79'

Elevation of Ground Surface: 627.90'

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: 627.22'

Type of Seal: BENTONITE CHIPS

Type of Sandpack: FINE

Elevation/Depth Top of Screen: 625.70'

Type of Screen: PVC

Slot Size x Length: .010" X 1.5'

I.D. Screen: 2"

Type of Sand Pack: COARSE

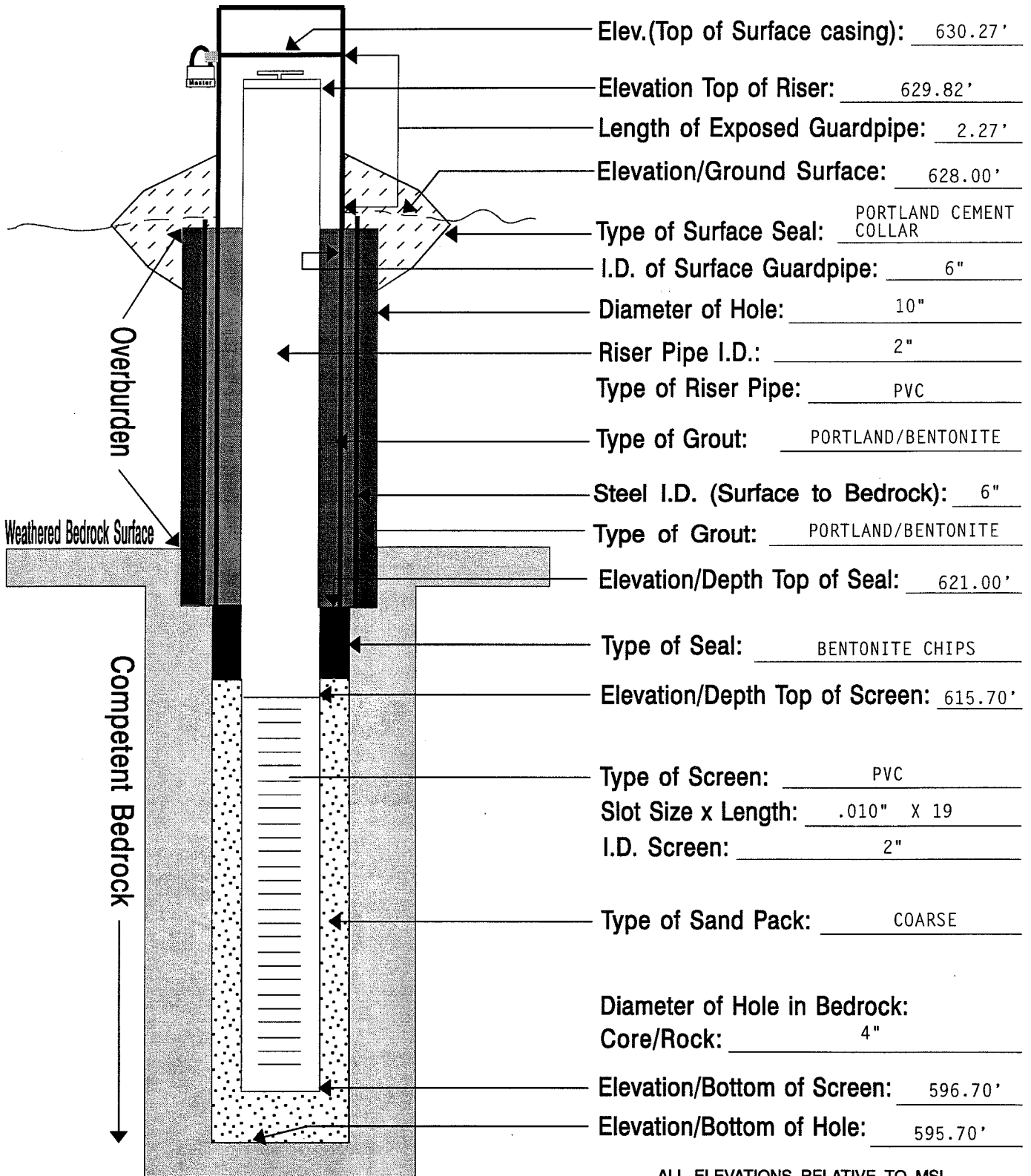
Elevation/Depth Bottom of Screen: 624.20'

Elevation/Depth Bottom of Hole: 623.70'

ALL ELEVATIONS RELATIVE TO MSL

BEDROCK MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	AMERICAN AUGER
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA
DATE	5-18-93	WELL NAME	MW-57D



Elev.(Top of Surface casing): 630.27'

Elevation Top of Riser: 629.82'

Length of Exposed Guardpipe: 2.27'

Elevation/Ground Surface: 628.00'

Type of Surface Seal: PORTLAND CEMENT COLLAR

I.D. of Surface Guardpipe: 6"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: PVC

Type of Grout: PORTLAND/BENTONITE

Steel I.D. (Surface to Bedrock): 6"

Type of Grout: PORTLAND/BENTONITE

Elevation/Depth Top of Seal: 621.00'

Type of Seal: BENTONITE CHIPS

Elevation/Depth Top of Screen: 615.70'

Type of Screen: PVC

Slot Size x Length: .010" X 19

I.D. Screen: 2"

Type of Sand Pack: COARSE

Diameter of Hole in Bedrock:
Core/Rock: 4"

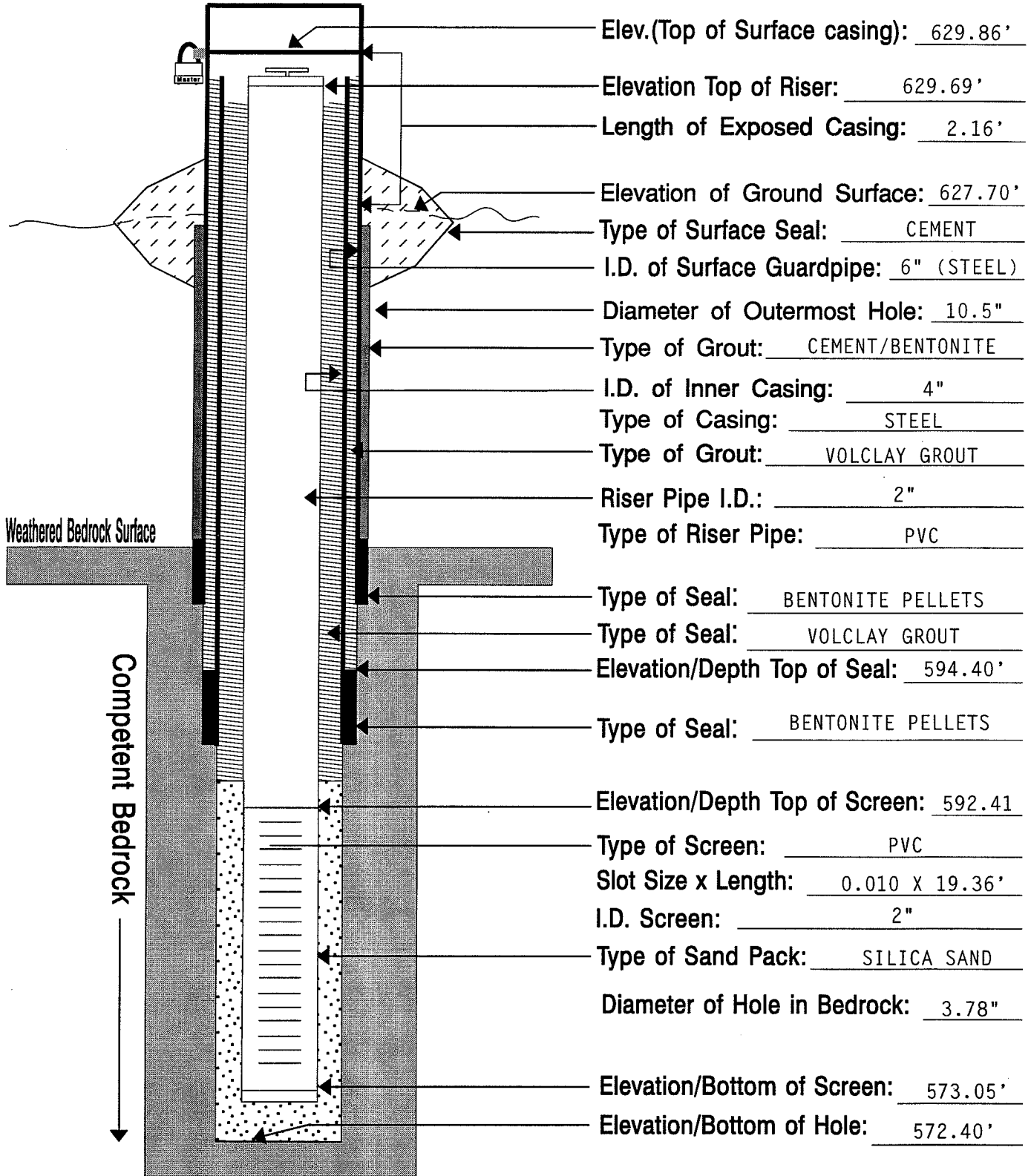
Elevation/Bottom of Screen: 596.70'

Elevation/Bottom of Hole: 595.70'

ALL ELEVATIONS RELATIVE TO MSL

BEDROCK MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	MAHER ENVIRONMENTAL
LOCATION	ASH LANDFILL	DRILLING METHOD	HSA AND CORING
DATE	4 JUNE 1993	WELL NAME	MW-58D



Elev.(Top of Surface casing):	<u>629.86'</u>
Elevation Top of Riser:	<u>629.69'</u>
Length of Exposed Casing:	<u>2.16'</u>
Elevation of Ground Surface:	<u>627.70'</u>
Type of Surface Seal:	<u>CEMENT</u>
I.D. of Surface Guardpipe:	<u>6" (STEEL)</u>
Diameter of Outermost Hole:	<u>10.5"</u>
Type of Grout:	<u>CEMENT/BENTONITE</u>
I.D. of Inner Casing:	<u>4"</u>
Type of Casing:	<u>STEEL</u>
Type of Grout:	<u>VOLCLAY GROUT</u>
Riser Pipe I.D.:	<u>2"</u>
Type of Riser Pipe:	<u>PVC</u>
Type of Seal:	<u>BENTONITE PELLETS</u>
Type of Seal:	<u>VOLCLAY GROUT</u>
Elevation/Depth Top of Seal:	<u>594.40'</u>
Type of Seal:	<u>BENTONITE PELLETS</u>
Elevation/Depth Top of Screen:	<u>592.41</u>
Type of Screen:	<u>PVC</u>
Slot Size x Length:	<u>0.010 X 19.36'</u>
I.D. Screen:	<u>2"</u>
Type of Sand Pack:	<u>SILICA SAND</u>
Diameter of Hole in Bedrock:	<u>3.78"</u>
Elevation/Bottom of Screen:	<u>573.05'</u>
Elevation/Bottom of Hole:	<u>572.40'</u>

11-7-06

Dan Lipp (Dad)

1430 SJB on site

Ben gave H+S Talk

1530 set up on MW-27

MW-27 is within Biowall

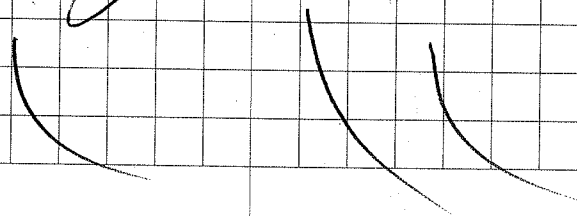
No SS sampling

Top of Rock (TOR) @ 11' bgs

well should have been at 11.5', pulling augers, will reset well tomorrow

1700 off site

DJL



②
11-8-06

0700 on site with SJB
moving MW-27 4' to
the South

MW-27 TOR @ 10'
drilled to 10.5' and
set well

MW-27s
Chip TO }
GS }
Sand TO 3.5' }
- 5.5 screen
- 10' TOR
- 10.5 TD

0850 Drillers on stand-
by, Ben said ~~would~~ stop
work while he talks
to the office

1020 Drillers off stand-by

11-8-06

③

1025
MW-26 set up

SS-1 HB = 20, 4, 15, 15
0-2' 20
Black sand & silt
some fine gravel (Topsoil)
(dry) no odor

SS-2 HB = 14, 13
2-4' 15, 14, 14, 13
Same as above
(dry) no odor

SS-3 HB 50/1
4-5.6' refusal @ 5.6'
Brown hard packed
sand, some fine gravel
(dry) no odor
TOR 5.6'

④ 27

11-8-06

MW-26 auguring to 10'

MW-26
 } chips
 } 3'2 sand
 5.6 TOR ← 5.2 screen
 }
 } 10'2 T7

1228 set up on MW-28
 MW-28 is within the
 Brownall No SS sampling
 TOR @ 10'

MW-28
 GS
 } chips 3' to GS
 }
 } sand 3' to 10'
 } 5 to 10' screen
 } TOR 10

11-8-06

27 5

1414 set up on MW-23
 MW-23 is within the
 Brownall No SS sampling
 TOR @ 11' augured to
 11.5'

MW-23
 GS
 } chips 4.5 to GS
 } 11.5 to 4.5 sand
 }
 } 11.6' to 6.5' screen
 } TOR @ 11'
 } T7 11.5 ↓

1540 set up on MW-29

MW-29 Hrs 5, 6, 8-14
 SS-1
 0-2'

Black sand + silt, (Top Soil)
 some fine gravel
 (dry) no odor

(6) JJ 11-8-6

MW-29

HB=12, 13, 14, 15

SS-2

2-4'

Brown sand and silt
some red clay, some
fine gravel
(dry) no odor

SS-3

4-6'

HB=5, 6, 5

gray clay and
silt, little fine
gravel
(dry) no odor

SS-4

6-8'

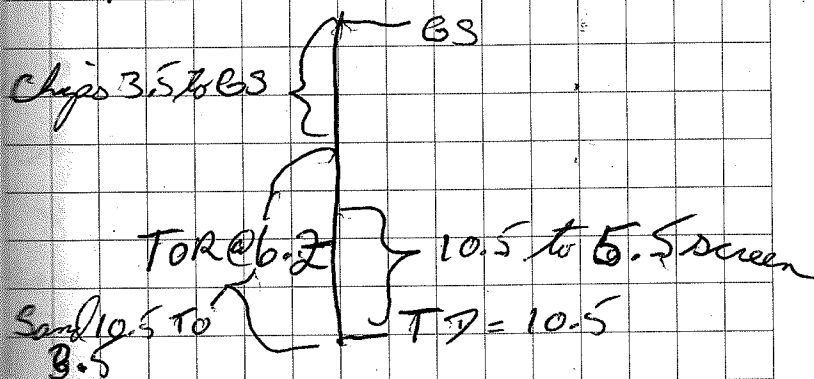
HB=50/2

only 2" of recovery
shale + gravel
(wet) no odor
TOR 6.2
augering to 10.5'

11-8-6

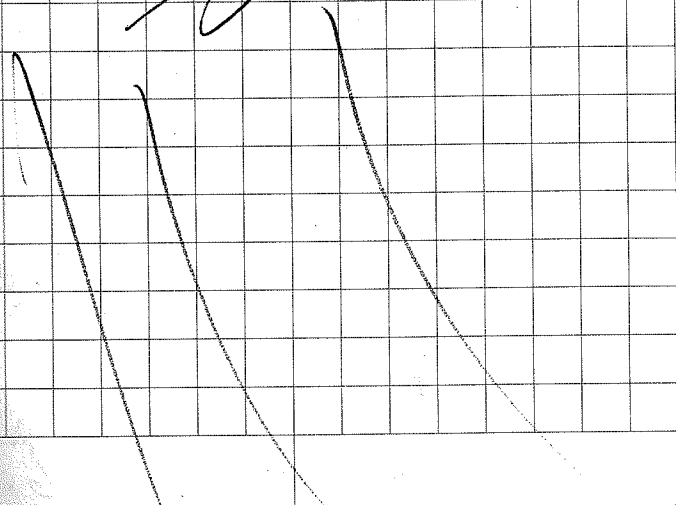
(7)

MW-29



1740 finished MW-29
off site

JJK



⑧ 7/21-9-06

0700 on site with
SJB
set up on MW-25

MW-25

SS-1

0-2'

HS=WH, 2, 4, 8

(Top soil) Black sand & silt
some fine gravel
(moist) (no odor)

SS-2

2-4'

HS=7, 14, 14, 15

same as above
(dry) no odor

SS-3

2-6'

HS=7, 13, 11, 10

same as above
(dry) (no odor)

SS-4

6-8

18 50/4

5" of recovery
dry gravel top @
6.8'

⑨ 11-9-06

MW-25 auguring down to 10'

MW-25
GS

chips 3' to GS

sand 10 to 3'

screen 10 to 5'

TOR 6.8

T9 10'

0928 set up on PT-18A

SS-1

PT-18A

0-2'

HS=WH, 2, 3, 3

Black fine sand & silt
(Top soil) some gravel
(moist) no odor

SS-2

2-4'

HS=11, 5, 53

same as above
(dry) no odor

(10)

JZ

11-9-06

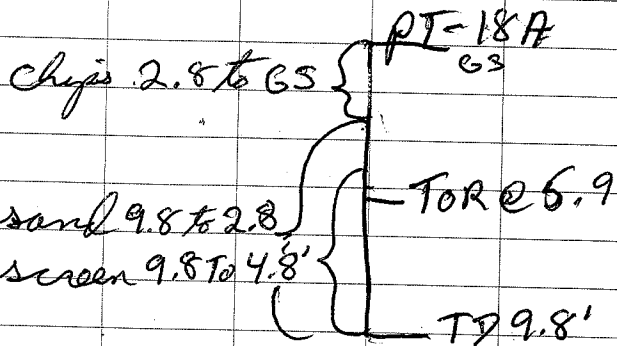
PT-18A

SS-3

4'-6'

HB 5, 7, 10, 11, 14

Hard packed gray
silt & clay, some
gravel (dry) no odor
TOR @ 5.9'



1050 set up on MW-24

MW-24

SS-1

0-2

HB 2, 3, 3, 4.

(Top soil) fine black
sand & silt
moist (no odor)

JZ

7.9

(11)

11-9-06

MW-24

SS-2

2-4'

HB = 6, 13, 15, 17

2 to 3' same as above
3 to 4' gray gravel &
shale
(dry) no odor

SS-3

4-6'

HB 11, 8, 9, 8

Black & brown
fine sand, some silt
some gravel
(dry) no odor

SS-4

6-8'

HB 13, 15, 38, 50, 1

gray silt and gravel
2' of recovery
TOR @ 7.9
augury to 11'

(12) JF 11-9-06

MW-24

MW24 CS

chips 4' to CS

sand 11' to 4'

screen 11' to 6'

7.9 TOR

TD 11'

1300 installing protective
barrier around wells

1730 off site

(13) JF 11-10-06

0700 on site, with SJB
(pods) installing forms and
protective casing around
all wells

installed pads and
protective casing
around all well

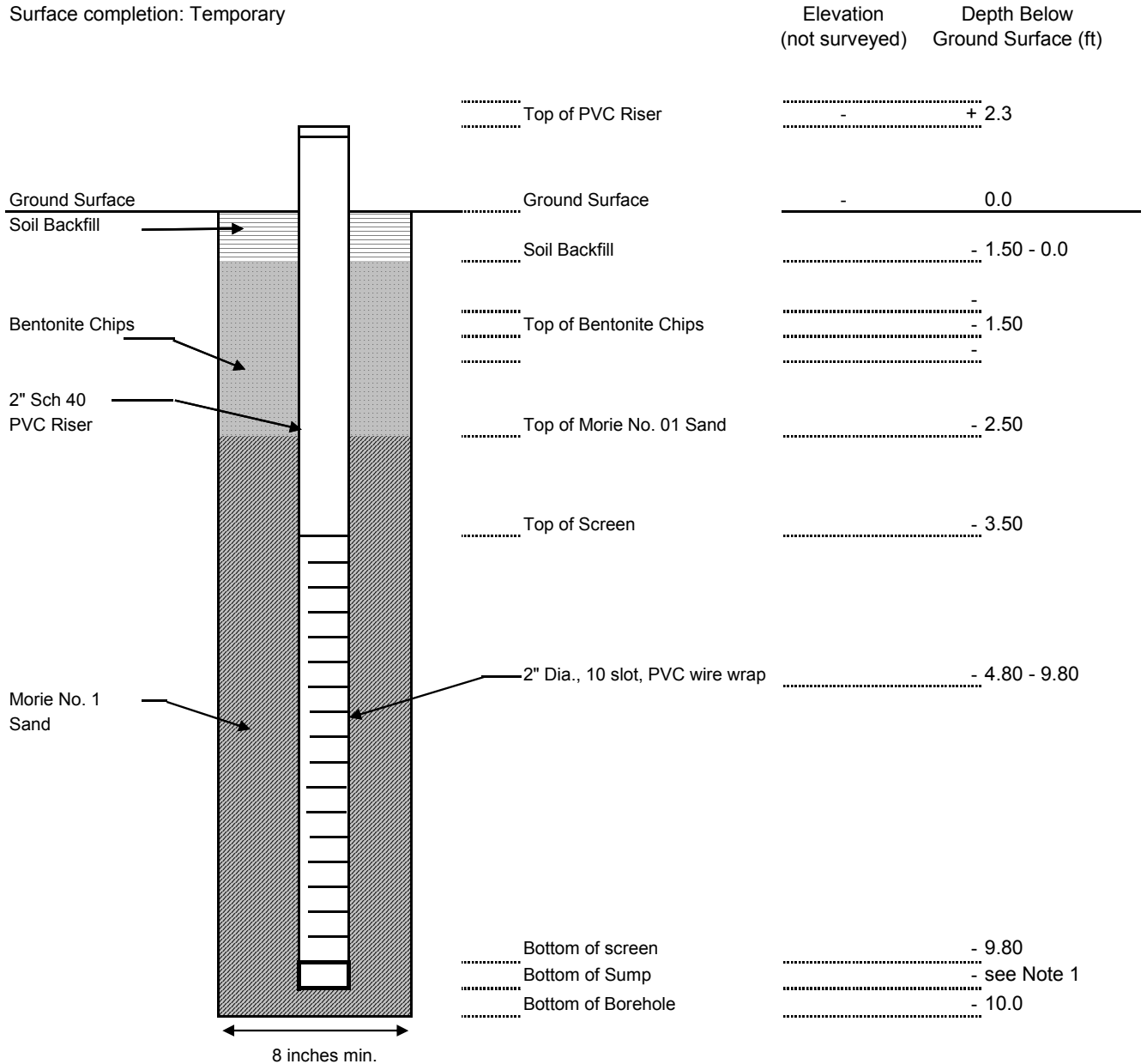
1400 off site

Monitoring Well Construction Detail SEAD-48

Seneca Army Depot Activity

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

Surface completion: Temporary



Not to scale

Notes:

(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

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

ENGINEERING-SCIENCE, INC.	CLIENT: <u>ACOE</u>	WELL #: <u>MW4-1</u>
PROJECT: <u>10 SWMU</u>	PROJECT NO: <u>720477</u>	INSPECTOR: <u>ES/KB</u>
LOCATION: <u>SEAD 4</u>	CHECKED BY: _____	

DRILLING CONTRACTOR: <u>Empire</u>	POW DEPTH: <u>10.5'</u>
DRILLER: <u>Scott</u>	INSTALLATION STARTED: <u>12-6-93</u>
DRILLING COMPLETED: <u>12-6-93</u>	INSTALLATION COMPLETED: <u>12-6-93</u>
BORING DEPTH: <u>10.5'</u>	SURFACE COMPLETION DATE: <u>12-6-93</u>
DRILLING METHOD(S): <u>HSA</u>	COMPLETION CONTRACTOR/CREW: <u>Empire</u>
BORING DIAMETER(S): <u>8 1/2'</u>	BEDROCK CONFIRMED (Y/N): <u>Y</u>
ASSOCIATED SWMU/AOC: <u>4</u>	ESTIMATED GROUND ELEVATION: <u>698.392</u>

PROTECTIVE SURFACE CASING:

DIAMETER: 4" x 4" Steel LENGTH: _____

RISER:

TR: _____ TYPE: PVC-P DIAMETER: 2" LENGTH: _____

SCREEN:

TSC: 5.4' TYPE: PVC 40 DIAMETER: 2" LENGTH: 4' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)

TYPE: PVC point BSC: 9.4' POW: 10.5'

GROUT:

TG: Ground TYPE: Cement-bentonite LENGTH: 2.5'

SEAL:

TBS: 2.5' TYPE: bentonite pellets LENGTH: 2'

SAND PACK:

TSP: 4.5' #1 5.0' #1 TYPE: #39 #1 LENGTH: 6.0'

SURFACE COLLAR:

TYPE: _____ RADIUS: 2'x2' THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS

DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT:

WELL #: MN4-1

DATE: 12-6-83

DESCRIPTION
(FROM BORING LOG)

DEPTH

STRATA

SCHEMATIC

TPC 700.516

DEPTH - ELEV.

TR

700.115

PIN

698.392

TG

Top #3 Sand 5.0'
Top #1 Sand 4.5'

TBS

2.5'

TSP

4.5'

TSC

5.4'

BSC

9.4'

POW

10.5'

BOV

BEDROCK

BOD

* NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL ROADWAY BOX - SURFACE COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW4-2
 PROJECT: 10 SWMU PROJECT NO: 720477
 LOCATION: SEAD 4 INSPECTOR: ES
 CHECKED BY: _____

DRILLING CONTRACTOR: Empire POW DEPTH: 40'
 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): 8 1/2" BEDROCK CONFIRMED (Y/N?): Y
 ASSOCIATED SWMU/AOC: 4 ESTIMATED GROUND ELEVATION: 699.448

PROTECTIVE SURFACE CASING:
 DIAMETER: 4" x 4" Steel LENGTH: _____

RISER:
 TR: _____ TYPE: PVC 40 DIAMETER: 2" LENGTH: _____

SCREEN:
 TSC: 22 TYPE: PVC-40 DIAMETER: 1 1/2" LENGTH: 10' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)
 TYPE: PVC point BSC: 3.2' POW: 40'

GROUT:
 TG: ground TYPE: Cem-bentonite LENGTH: _____

SEAL:
 TBS: 1.0' TYPE: bentonite pellets LENGTH: 0.5'

SAND PACK:
 TSP: 1.5'-#1 1.6'-#3 TYPE: #3 + #1 LENGTH: 2.5'

SURFACE COLLAR:
 TYPE: Cement RADIUS: 2' x 3' THICKNESS CENTER: 1 THICKNESS EDGE: 1'

CENTRALIZER DEPTHS
 DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

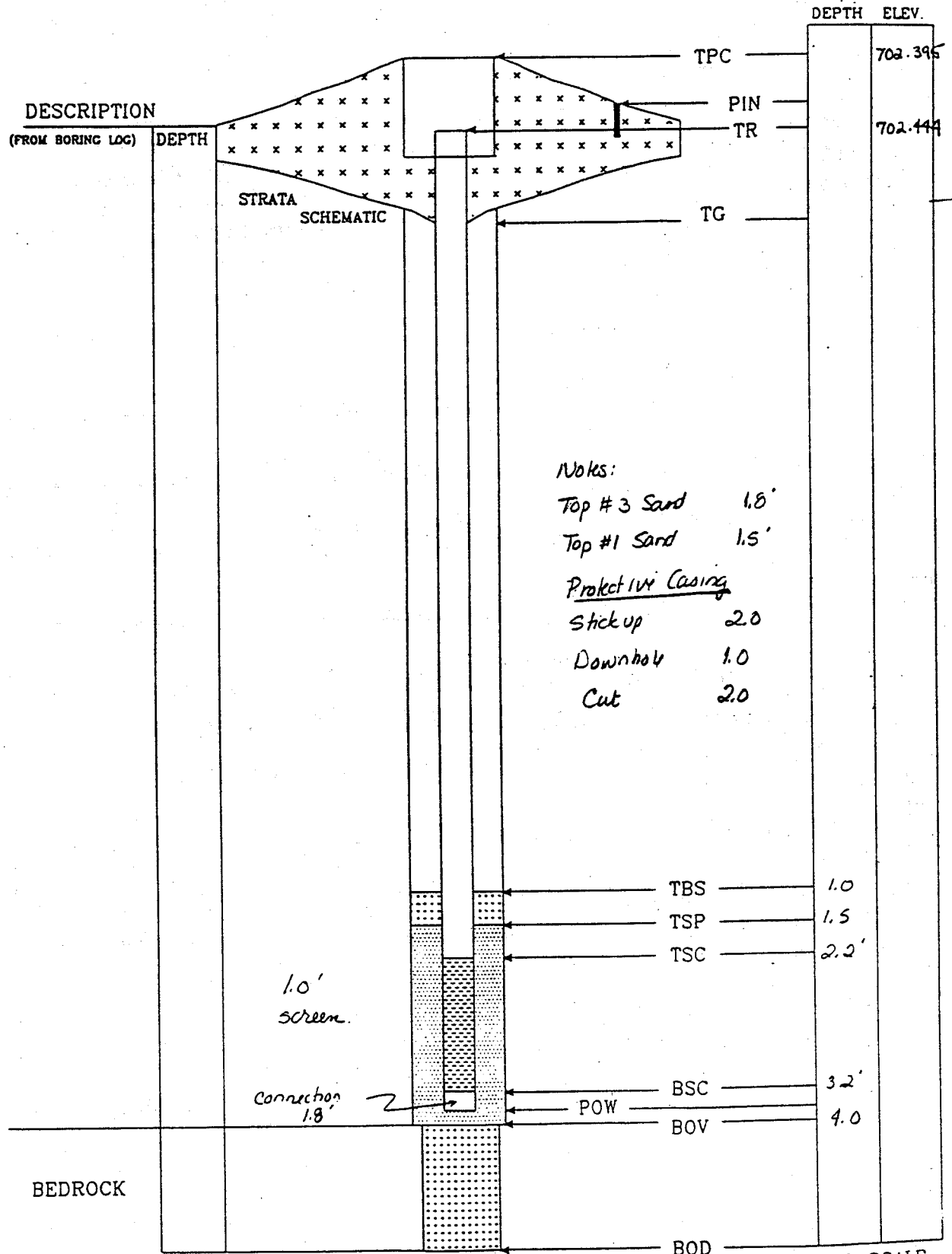
OVERBURDEN MONITORING WELL ROADWAY BOX INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT: *ACOE*

WELL #: *MW 4-2*

DATE *11/10/93*



Note: All depths meas. from ground surface * NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL ROADWAY BOX - SURFACE COMPLETION

ENGINEERING-SCIENCE, INC.	CLIENT: <u>ACOE</u>	WELL #: <u>MW4-3</u>
PROJECT: <u>10 SWMU</u>	PROJECT NO: <u>720477</u>	
LOCATION: <u>SEAD 4</u>	INSPECTOR: <u>ES</u>	
CHECKED BY: _____		

DRILLING CONTRACTOR: <u>Empire</u>	POW DEPTH: <u>9.0'</u>
DRILLER: <u>Bob</u>	INSTALLATION STARTED: <u>11/10/93</u>
DRILLING COMPLETED: <u>11/10/93</u>	INSTALLATION COMPLETED: <u>11/10/93</u>
BORING DEPTH: <u>9.0'</u>	SURFACE COMPLETION DATE: <u>11/10/93</u>
DRILLING METHOD(S): <u>HSA</u>	COMPLETION CONTRACTOR/CREW: <u>Empire</u>
BORING DIAMETER(S): <u>8 1/2"</u>	BEDROCK CONFIRMED (Y/N?): <u>Y</u>
ASSOCIATED SWMU/AOC: <u>4</u>	ESTIMATED GROUND ELEVATION: <u>697.669</u>

PROTECTIVE SURFACE CASING:

DIAMETER: 4" x 4" Steel LENGTH: _____

RISER:

TR: _____ TYPE: PVC-40 DIAMETER: 2" LENGTH: _____

SCREEN:

TSC: 3.9' TYPE: PVC-40 DIAMETER: 1 1/2" LENGTH: 4.0' SLOT SIZE: .01"

POINT OF WELL: (SILT SUMP)

TYPE: PVC point BSC: 7.9' POW: 9.0'

GROUT:

TG: Gravel TYPE: Cem-bentonite LENGTH: 1.4'

SEAL:

TBS: 1.4 TYPE: bentonite pellets LENGTH: 1.0'

SAND PACK:

TSP: #3-2.9'
#1-2.9' TYPE: #3 + #1 LENGTH: 6.6'

SURFACE COLLAR:

TYPE: Cement RADIUS: 2' x 2' THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS

DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

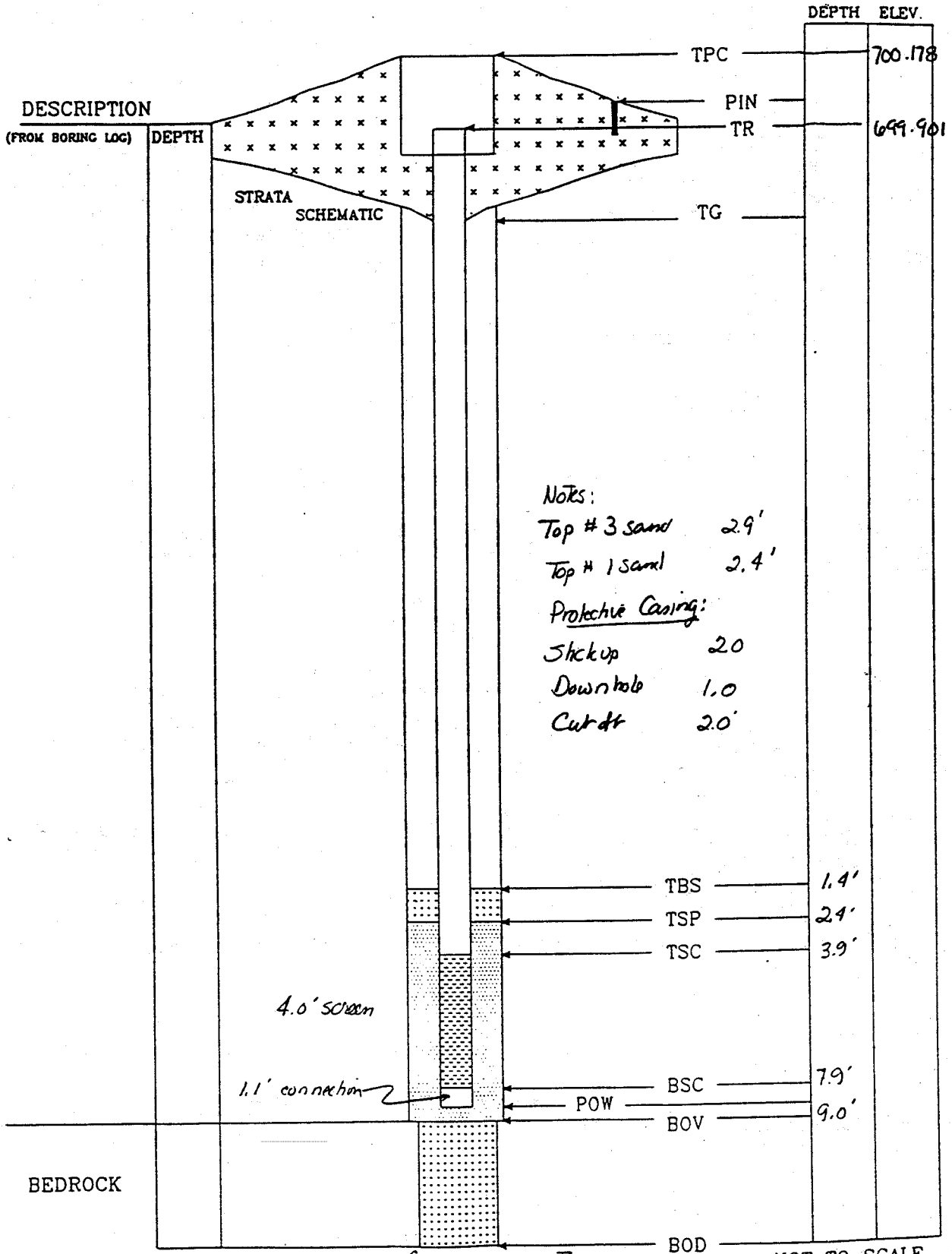
OVERBURDEN MONITORING WELL ROADWAY BOX INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT: *ACOE*

WELL #: *MW4-3*

DATE: *11/10/93*



Notes:
 Top # 3 sand 2.9'
 Top # 1 sand 2.4'
Protective Casing:
 Stickup 2.0'
 Downhole 1.0'
 Cut off 2.0'

Note: Depths measured from ground surface

** NOT TO SCALE*

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT: <u>ACOE</u>		WELL #: <u>MW4-4</u>	
PROJECT: <u>10 SWMU</u>		PROJECT NO: <u>726477</u>	
LOCATION: <u>SEAD 4</u>		INSPECTOR: <u>ES</u>	
		CHECKED BY: _____	
DRILLING CONTRACTOR: <u>Empire</u>		POW DEPTH: <u>10.0</u>	
DRILLER: <u>Scott</u>		INSTALLATION STARTED: <u>12-5-93</u>	
DRILLING COMPLETED: <u>12-5-93</u>		INSTALLATION COMPLETED: <u>12-5-93</u>	
BORING DEPTH: <u>10'</u>		SURFACE COMPLETION DATE: <u>12-5-93</u>	
DRILLING METHOD(S): <u>ASA</u>		COMPLETION CONTRACTOR/CREW: <u>Empire</u>	
BORING DIAMETER(S): <u>8 1/2"</u>		BEDROCK CONFIRMED (Y/N)? <u>Y</u>	
ASSOCIATED SWMU/AOC: <u>4</u>		ESTIMATED GROUND ELEVATION: <u>678.217</u>	

PROTECTIVE SURFACE CASING:

DIAMETER: 4" x 4" Steel LENGTH: _____

RISER:

TR: _____ TYPE: PVC-40 DIAMETER: 2" LENGTH: _____

SCREEN:

TSC: 4.9' TYPE: PVC-40 DIAMETER: 2" LENGTH: 4.0' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)

TYPE: PVC point BSC: 8.9' POW: 10.0'

GROUT:

TG: Ground TYPE: Cement-bentonite LENGTH: 2.5'SEAL: TBS: 2.5' TYPE: bentonite pellets LENGTH: 1.5'SAND PACK: TSP: 4.0' - #1 4.5' - #3 TYPE: #3 and #1 LENGTH: 6.0'

SURFACE COLLAR:

TYPE: Cement RADIUS: 2' x 2' THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS

DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT:

WELL #: MW 4-4

DATE: 12-5-93

DESCRIPTION
(FROM BORING LOG)

DEPTH

STRATA
SCHEMATIC

TPC 680.557 DEPTH: ELEV.

TR 680.374

PIN

TG

*Top # 1 Sand 4.0
Top # 3 Sand 4.5'*

TBS 2.5'

TSP 4.0'

TSC 4.9'

BSC 8.9'

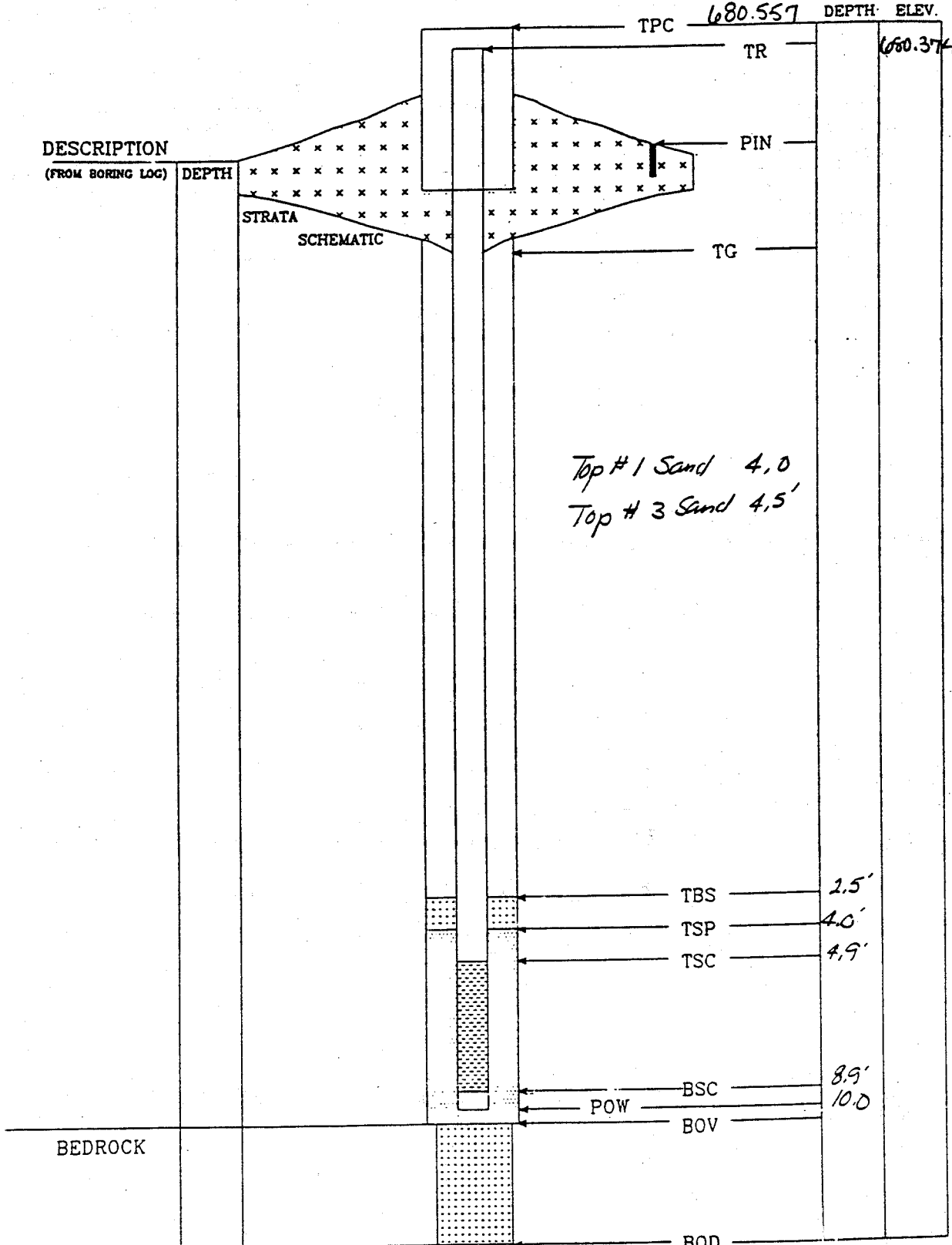
POW 10.0'

BOV

BEDROCK

BOD

• NOT TO SCALE



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: Empire POW DEPTH: 6.0'
 DRILLER: John W. INSTALLATION STARTED: 12/5/93
 DRILLING COMPLETED: 12-5-93 INSTALLATION COMPLETED: 12/5/93
 BORING DEPTH: 6.0 SURFACE COMPLETION DATE: 12/5/93
 DRILLING METHOD(S): HSA COMPLETION CONTRACTOR/CREW: Empire
 BORING DIAMETER(S): 8 1/2" BEDROCK CONFIRMED (Y/N?): Y
 ASSOCIATED SWMU/AOC: 4 ESTIMATED GROUND ELEVATION: 699.182

PROTECTIVE SURFACE CASING:
 DIAMETER: 4" x 4" Steel LENGTH: _____

RISER:
 TR: _____ TYPE: PVC-40 DIAMETER: 2" LENGTH: _____

SCREEN:
 TSC: 3.1 TYPE: PVC-40 DIAMETER: 2" LENGTH: 20' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)
 TYPE: PVC point BSC: 5.1 POW: 6.0'

GROUT:
 TG: Ground TYPE: Cement-bentonite LENGTH: 1.3'

SEAL:
 TBS: 13 TYPE: bentonite pellets LENGTH: .7'

SAND PACK:
 TSP: 2'-#1 2.5'-#3 TYPE: #3 and #1 LENGTH: 4.0'

SURFACE COLLAR:
 TYPE: Cement RADIUS: 2' x 2' THICKNESS CENTER: 1 THICKNESS EDGE: 1'

CENTRALIZER DEPTHS
 DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT:

WELL #: MW4-5

DATE: 12-5-93

DESCRIPTION
(FROM BORING LOG)

DEPTH

STRATA

SCHEMATIC

TPC 700.548 DEPTH ELEV.

TR 700.460

PIN

TG

Top of #3 2.5'
Top of H1 2.0'

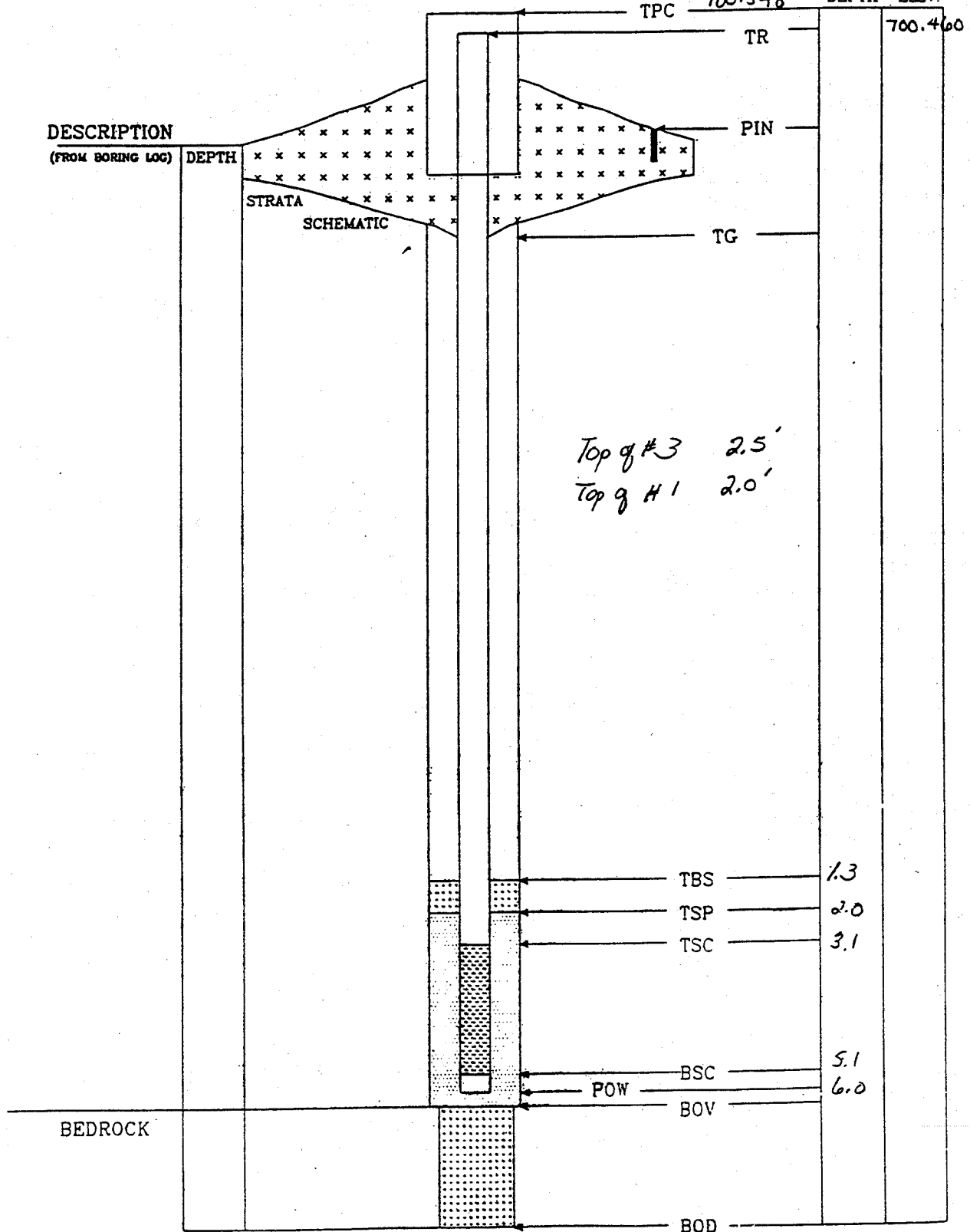
TBS 1.3
TSP 2.0
TSC 3.1

BSC 5.1
POW 6.0
BOV

BEDROCK

BOD

* NOT TO SCALE



Parsons ES Inc.

WELL NUMBER: MW4-6

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

CLIENT/PROJECT: Seneca Army Depot
LOCATION: Sead 4

PROJECT NO: 734537-01001
INSPECTOR: LLB
CHECKED BY: _____

DRILLING CONTRACTOR: Maxim
DRILLER: S. Breeds
DRILLING COMPLETED: 12/19/98
BORING DEPTH: 9.9'
DRILLING METHOD(S): 4 1/4" HSA
BORING DIAMETER(S): 8"

POW DEPTH: 9.8'
INSTALLATION STARTED: 12/19/98
INSTALLATION COMPLETED: 12/19/98
SURFACE COMPLETION DATE: 1/7/99
COMPLETION CONTRACTOR/CREW: Maxim/Breeds
BEDROCK CONFIRMED: Y

ASSOCIATED SWMU/AOC: Sead #4
COORDINATE SYSTEM: _____
DATUM: _____ NGVD 1929
ELEVATIONS: PIN: _____ TOC: _____

NORTHING: _____ EASTING: _____
TPC: _____

PROTECTIVE CASING:
TYPE: Steel DIAMETER: 4" LENGTH: 5'

RISER:
TR: -2.3' TYPE: PVC DIAMETER: 2" LENGTH: 6.8'

SCREEN:
TSC: 4.5' TYPE: PVC DIAMETER: 2" LENGTH: 4.9' SLOT SIZE: 10

POINT OF WELL:(SILT SUMP)
TYPE: PVC BSC: 9.4' POW: 9.8'

SURFACE SEAL: TYPE: Grout DIAMETER: 2' THICKNESS: 1'

GROUT: TG: GS TYPE: Sand & Grift Gravel LENGTH: 2'
JB

SEAL: TBS: 2' TYPE: Bentonite LENGTH: 2'

SAND PACK: TSP: 4.0', 4.5' TYPE: #00, #0 LENGTH: 5.9'

COMMENTS:

LEGEND (DEPTH TO):

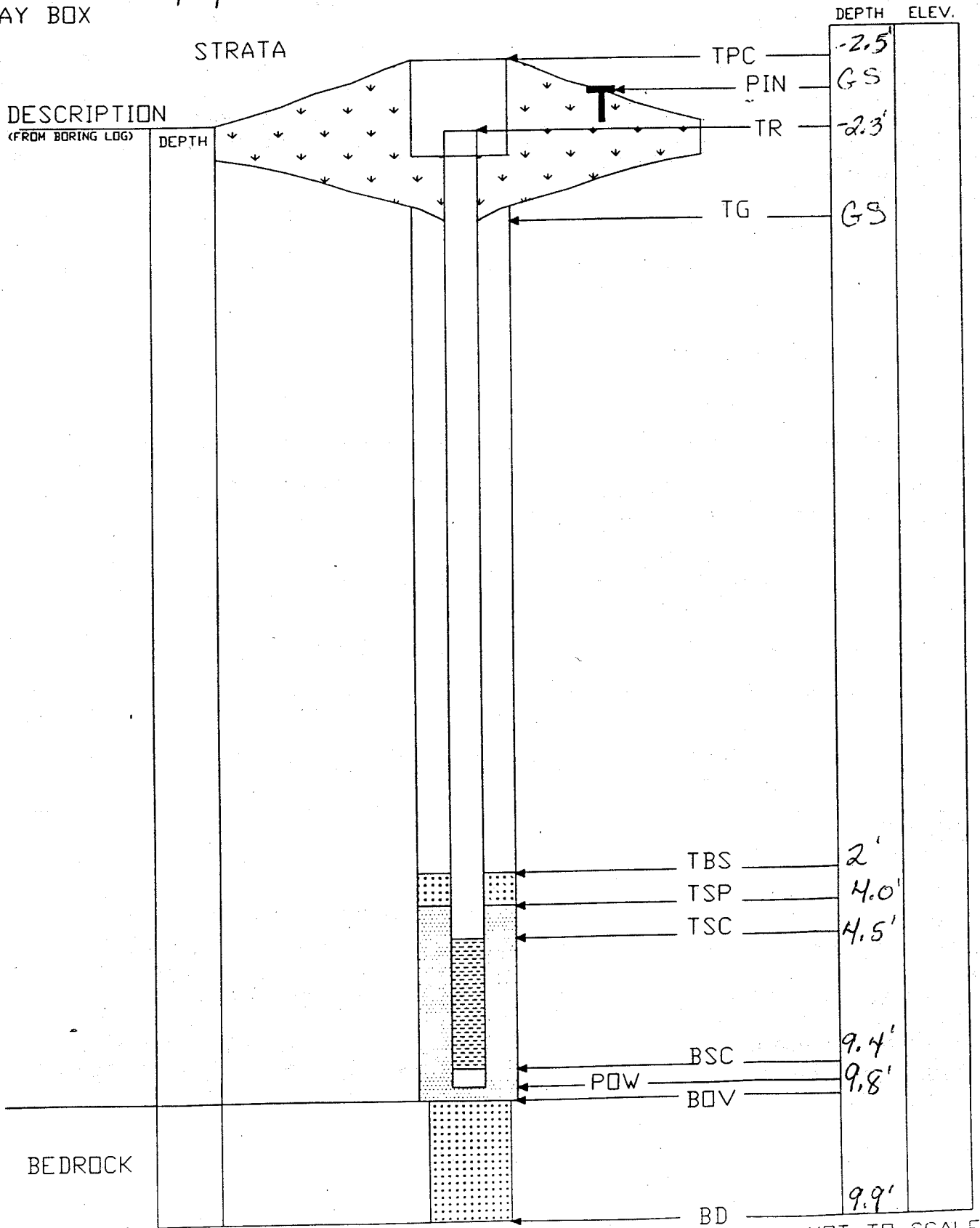
TPC-TOP OF PROTECTIVE CASING:
TR-TOP OF RISER
PIN-SURVEYED GROUND SURFACE
TG-TOP OF GROUT
BD-BOTTOM OF DRILL HOLE
BOV-BASE OF OVERBURDEN

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

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

DATE INSTALLED: 12/19/98
ROADWAY BOX



* NOT TO SCALE

Parsons ES Inc.

WELL NUMBER: MW-7

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

CLIENT/PROJECT: Seneca Army Depot
LOCATION: Sead 4

PROJECT NO: 734539-01001
INSPECTOR: LLB
CHECKED BY: _____

DRILLING CONTRACTOR: Maxim
DRILLER: S. Breeds
DRILLING COMPLETED: 12/20/98
BORING DEPTH: 6'
DRILLING METHOD(S): 4 1/4" HSA
BORING DIAMETER(S): 8"

POW DEPTH: 6.4'
INSTALLATION STARTED: 12/20/98
INSTALLATION COMPLETED: 12/20/98
SURFACE COMPLETION DATE: 1/7/99
COMPLETION CONTRACTOR/CREW: Maxim/Breeds
BEDROCK CONFIRMED: Y

ASSOCIATED SWMU/AOC: Sead
COORDINATE SYSTEM: _____
DATUM: NGVD 1929
ELEVATIONS: PIN: _____ TOC: _____

NORTHING: _____ EASTING: _____
TPC: _____

PROTECTIVE CASING:

TYPE: Steel DIAMETER: 4" LENGTH: 5'

RISER:

TR: -2.1 TYPE: PVC DIAMETER: 2" LENGTH: 5.3'

SCREEN:

TSC: 3.2' TYPE: PVC DIAMETER: 2" LENGTH: 2' SLOT SIZE: 10

POINT OF WELL:(SILT SUMP)

TYPE: PVC BSC: 5.2' POW: 6'

SURFACE SEAL:

TYPE: Grout DIAMETER: 2' THICKNESS: 1'

GROUT:

TG: 65 TYPE: Sand + Gravel LENGTH: 1' 25

SEAL:

TBS: 1' TYPE: Bentonite LENGTH: 1.5'

SAND PACK:

TSP: 2.5', 3.0' TYPE: #00, #0 LENGTH: 3.5'

COMMENTS:

LEGEND (DEPTH TO):

TPC-TOP OF PROTECTIVE CASING:
TR-TOP OF RISER
PIN-SURVEYED GROUND SURFACE
TG-TOP OF GROUT
BD-BOTTOM OF DRILL HOLE
BOV-BASE OF OVERBURDEN

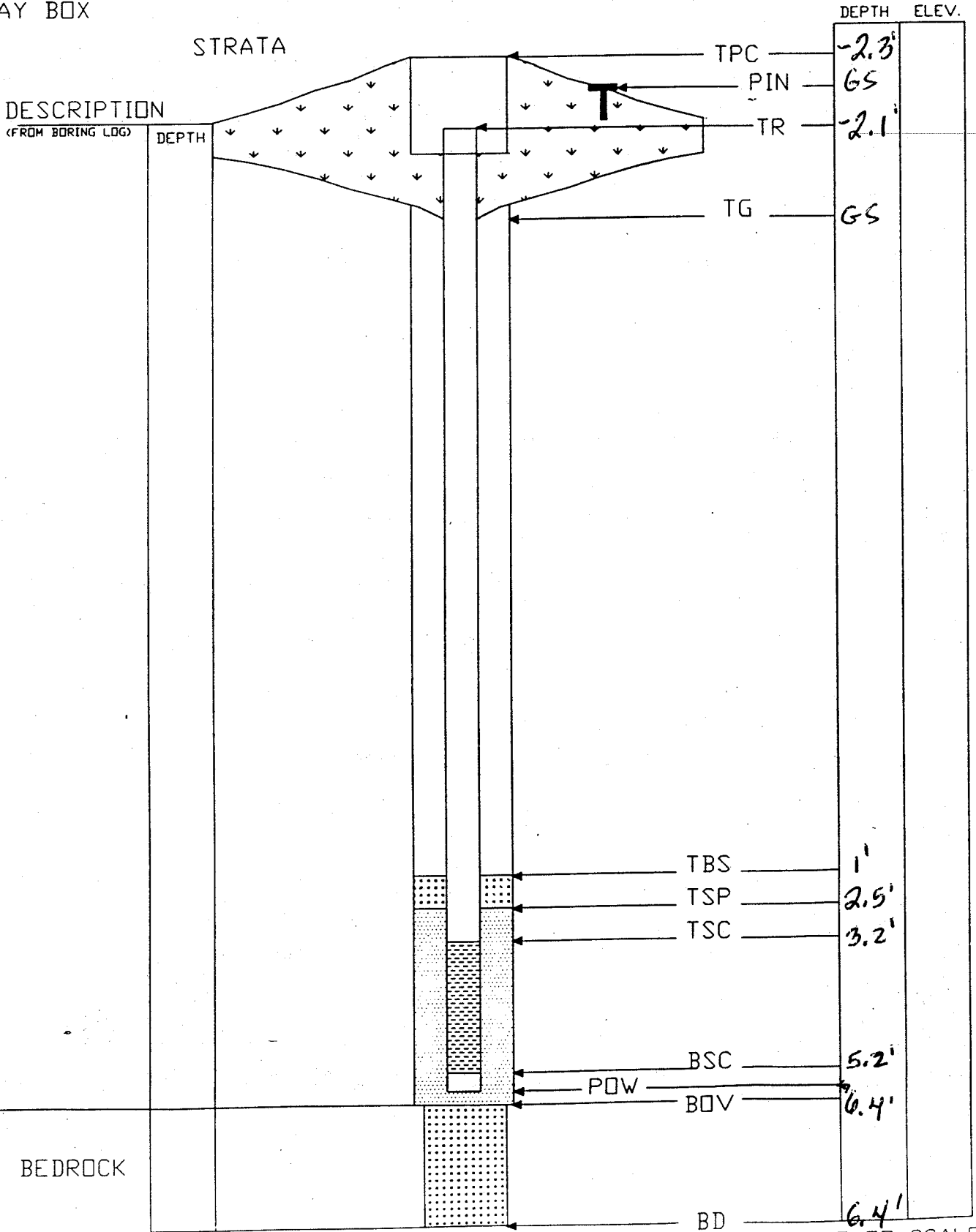
TBS-TOPOF BENTONITE SEAL
TSP-TOP OF SANDPACK
TSC-TOP OF SCREEN
BSC-BOTTOM OF SCREEN
POW-POINT OF WELL

* ALL MEASUREMENTS REFERENCED TO GROUND SURFACE

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

DATE INSTALLED: 12/20/98

ROADWAY BOX



* NOT TO SCALE

Parsons ES Inc.

WELL NUMBER: MW4-8

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

CLIENT/PROJECT: Seneca Army Depot
LOCATION: Sead 4

PROJECT NO: 734539-01001
INSPECTOR: LJB
CHECKED BY: _____

DRILLING CONTRACTOR: Maxim
DRILLER: S. Reeds
DRILLING COMPLETED: 12/19/98
BORING DEPTH: 10'
DRILLING METHOD(S): 4 1/4" HSA
BORING DIAMETER(S): 8"

POW DEPTH: 9.9'
INSTALLATION STARTED: 12/19/98
INSTALLATION COMPLETED: 12/19/98
SURFACE COMPLETION DATE: 1/7/99
COMPLETION CONTRACTOR/CREW: Maxim/Reeds
BEDROCK CONFIRMED: Y

ASSOCIATED SWMU/AOC: Sead
COORDINATE SYSTEM: _____
DATUM: NGVD 1929
ELEVATIONS: PIN: _____ TOC: _____

NORTHING: _____ EASTING: _____
TPC: _____

PROTECTIVE CASING:
TYPE: Steel DIAMETER: 4" LENGTH: 5'

RISER:
TR: -2.3' TYPE: PVC DIAMETER: 2" LENGTH: 6.9'

SCREEN:
TSC: 4.6' TYPE: PVC DIAMETER: 2" LENGTH: 4.9' SLOT SIZE: 10

POINT OF WELL:(SILT SUMP)
TYPE: PVC BSC: 9.5' POW: 10'

SURFACE SEAL: TYPE: Grout DIAMETER: 2' THICKNESS: 1'

GROUT: TG: GS TYPE: Sand & Gravel LENGTH: 2'

SEAL: TBS: 2' TYPE: Bentonite LENGTH: 2'

SAND PACK: TSP: 4.0', 4.6' TYPE: #00, #0 LENGTH: 6.0'

COMMENTS:

LEGEND (DEPTH TO):

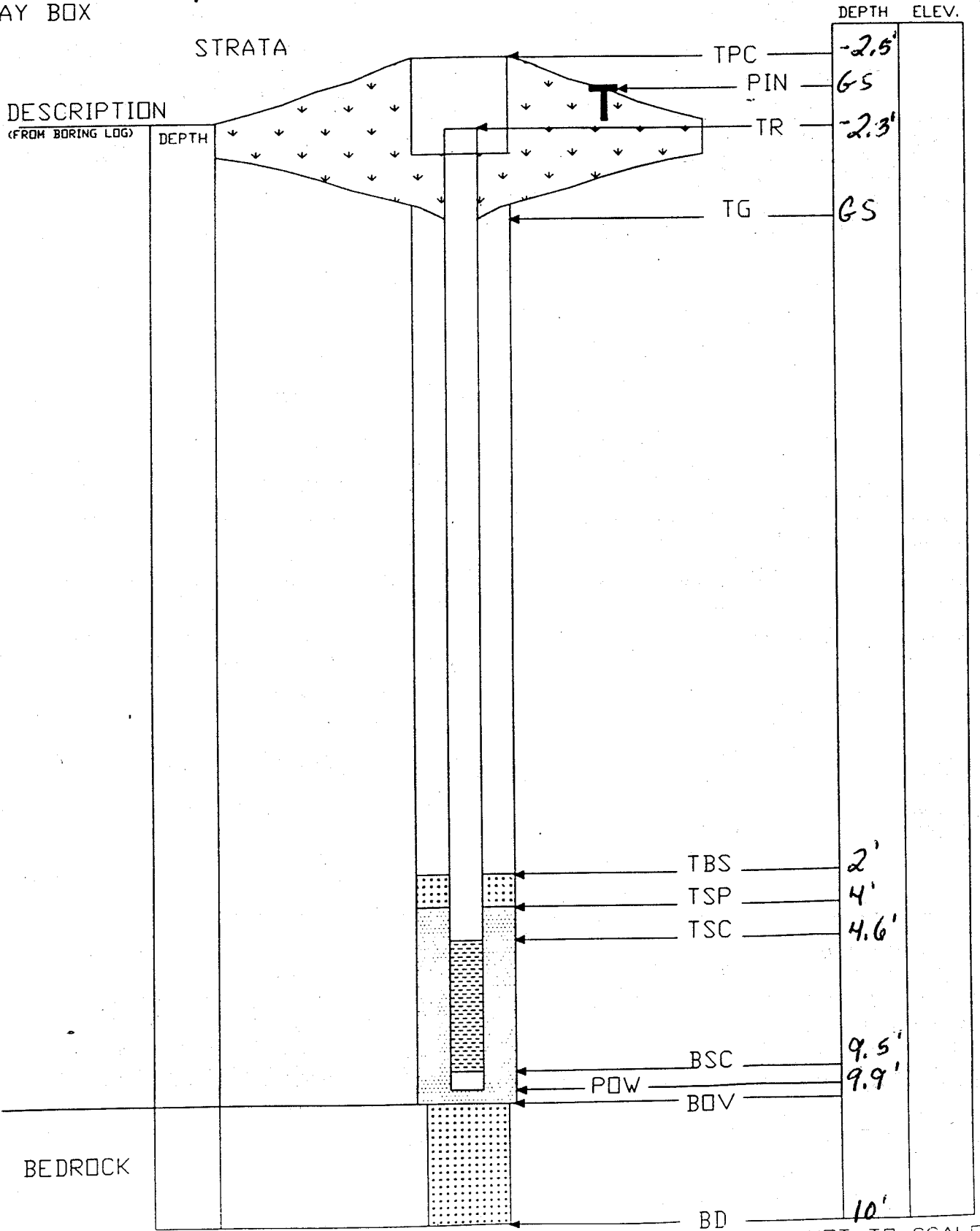
TPC-TOP OF PROTECTIVE CASING:
TR-TOP OF RISER
PIN-SURVEYED GROUND SURFACE
TG-TOP OF GROUT
BD-BOTTOM OF DRILL HOLE
BOV-BASE OF OVERBURDEN

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

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

DATE INSTALLED: 12/19/98
ROADWAY BOX



NOT TO SCALE

Parsons ES Inc.

WELL NUMBER: MW4-9

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

CLIENT/PROJECT: Seneca Army Depot
LOCATION: Sead 4

PROJECT NO: 734539-01001
INSPECTOR: Lib
CHECKED BY: _____

DRILLING CONTRACTOR: Maxim
DRILLER: S. Breeds
DRILLING COMPLETED: 12/20/98
BORING DEPTH: 6.2
DRILLING METHOD(S): 4 1/4" HSA
BORING DIAMETER(S): 3"

POW DEPTH: 6.5'
INSTALLATION STARTED: 12/20/98
INSTALLATION COMPLETED: 12/20/98
SURFACE COMPLETION DATE: 1/7/99
COMPLETION CONTRACTOR/CREW: Maxim/Breeds
BEDROCK CONFIRMED: Y

ASSOCIATED SWMU/AOC: SEAD
COORDINATE SYSTEM: _____
DATUM: NGVD 1929
ELEVATIONS: PIN: _____ TOC: _____

NORTHING: _____ EASTING: _____
TPC: _____

PROTECTIVE CASING:
TYPE: Steel DIAMETER: 4" LENGTH: 5'

RISER:
TR: -2.3' TYPE: PVC DIAMETER: 2" LENGTH: 5.7'

SCREEN:
TSC: 3.4' TYPE: PVC DIAMETER: 2" LENGTH: 2' SLOT SIZE: 10

POINT OF WELL:(SILT SUMP)
TYPE: PVC BSC: 5.4' POW: 6.2'

SURFACE SEAL: TYPE: Grout DIAMETER: 2' THICKNESS: 1"

GROUT: TG: GS TYPE: Sand + Gravel LENGTH: 1'

SEAL: TBS: 1' TYPE: Bentonite LENGTH: 1.5'

SAND PACK: TSP: 2.5', 3.0' TYPE: #00, #0 LENGTH: 3.8'

COMMENTS:

LEGEND (DEPTH TO):

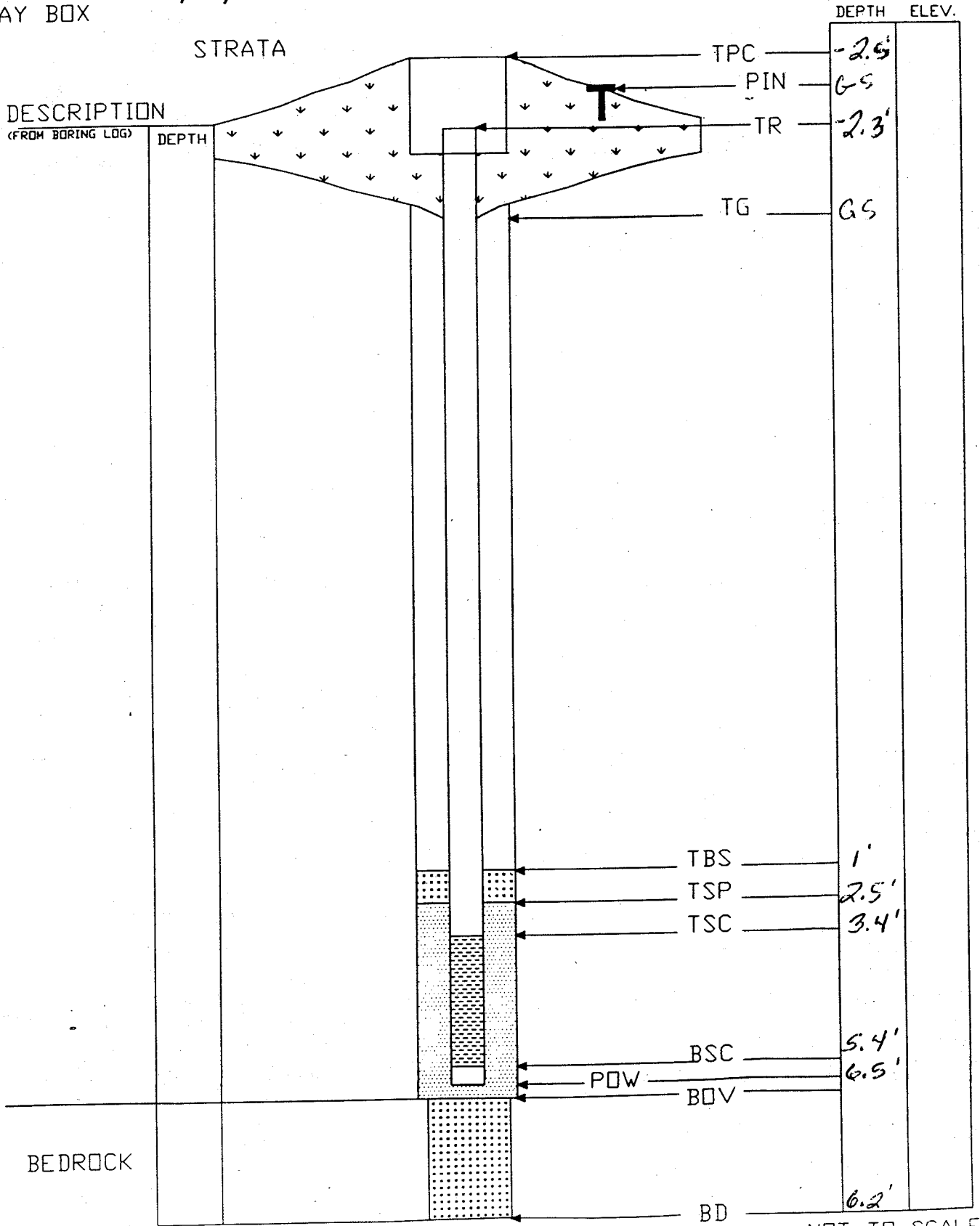
TPC-TOP OF PROTECTIVE CASING:
TR-TOP OF RISER
PIN-SURVEYED GROUND SURFACE
TG-TOP OF GROUT
BD-BOTTOM OF DRILL HOLE
NOV-BASE OF OVERBURDEN

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

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

DATE INSTALLED: 12/20/98
ROADWAY BOX



* NOT TO SCALE

Parsons ES Inc.

WELL NUMBER: MW4-10

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

CLIENT/PROJECT: Seneca Army Depot
LOCATION: Sead4

PROJECT NO: 734539-01001
INSPECTOR: LLB
CHECKED BY: _____

DRILLING CONTRACTOR: Maxim
DRILLER: S. Breeds
DRILLING COMPLETED: 12/17/98
BORING DEPTH: 8.0'
DRILLING METHOD(S): 4 1/2" HSA
BORING DIAMETER(S): 8"

POW DEPTH: 8.1"
INSTALLATION STARTED: 12/17/98
INSTALLATION COMPLETED: 12/17/98
SURFACE COMPLETION DATE: 1/7/99
COMPLETION CONTRACTOR/CREW: Maxim/Breeds
BEDROCK CONFIRMED: Y

ASSOCIATED SWMU/AOC: SEAD
COORDINATE SYSTEM: _____
DATUM: NGVD 1929
ELEVATIONS: PIN: _____ TOC: _____

NORTHING: _____ EASTING: _____
TPC: _____

PROTECTIVE CASING:
TYPE: Steel DIAMETER: 4" LENGTH: 5'

RISER:
TR: -2.1' TYPE: PVC DIAMETER: 2" LENGTH: 4.7'

SCREEN:
TSC: 2.6' TYPE: Pvc DIAMETER: 2" LENGTH: 4.9' SLOT SIZE: 10

POINT OF WELL:(SILT SUMP)
TYPE: PVC BSC: 7.5' POW: 8.0'

SURFACE SEAL: TYPE: Grout DIAMETER: 2' THICKNESS: 1'

GROUT: TG: 6.5 TYPE: Sand & Gravel LENGTH: 1.0'

SEAL: TBS: 1.0' TYPE: Bentonite LENGTH: 1.0'

SAND PACK: TSP: 2.0', 2.5' TYPE: #00, #0 LENGTH: 6.0'

COMMENTS:

LEGEND (DEPTH TO):

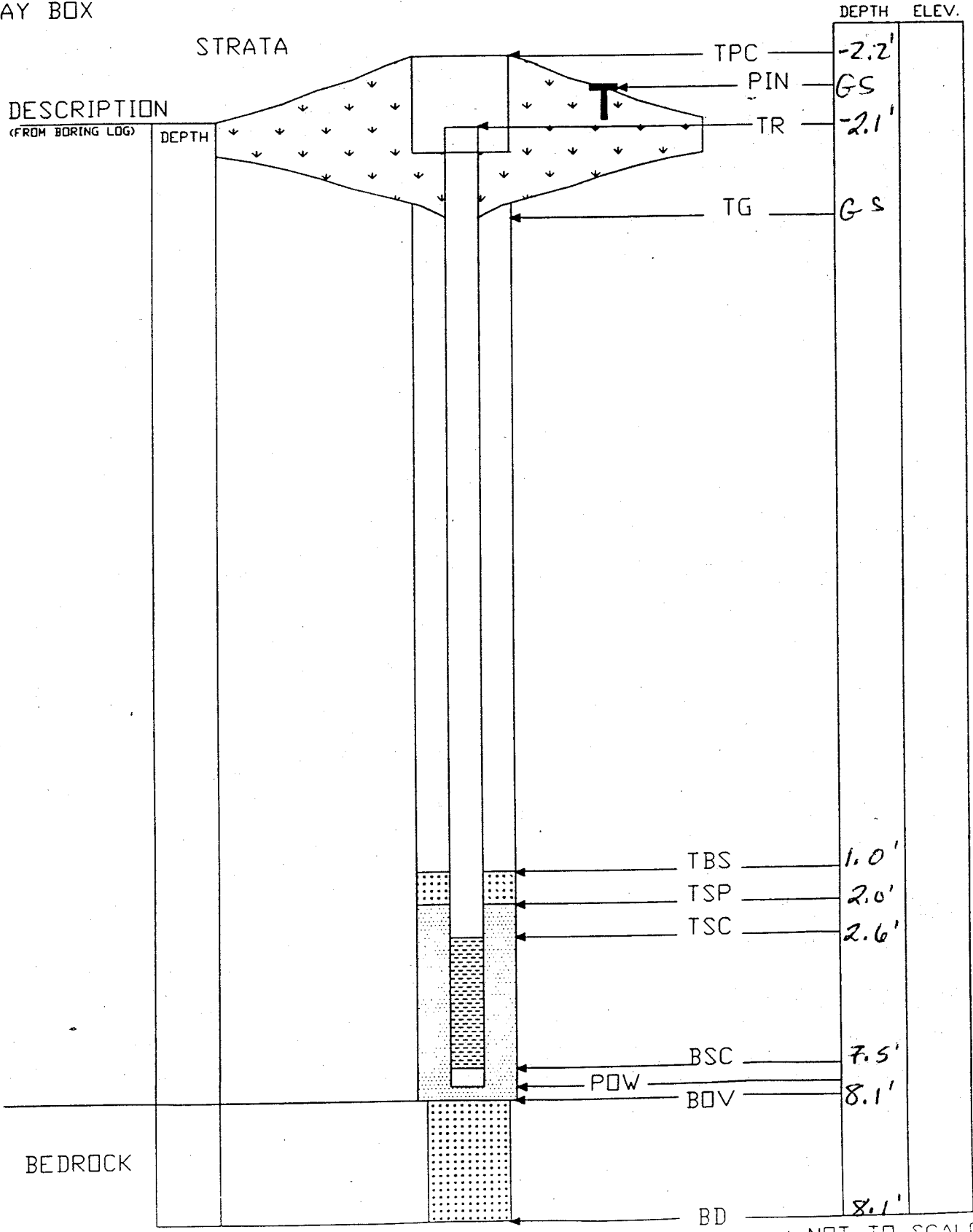
TPC-TOP OF PROTECTIVE CASING:
TR-TOP OF RISER
PIN-SURVEYED GROUND SURFACE
TG-TOP OF GROUT
BD-BOTTOM OF DRILL HOLE
BOV-BASE OF OVERBURDEN

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

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

DATE INSTALLED: 12/17/98
ROADWAY BOX



Parsons ES Inc.

WELL NUMBER: MW4-11

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

CLIENT/PROJECT: Seneca Army Depot
LOCATION: Seed 4

PROJECT NO: 734539-01001
INSPECTOR: CLB
CHECKED BY: _____

DRILLING CONTRACTOR: Maxim
DRILLER: S. Breeds
DRILLING COMPLETED: 12/20/98
BORING DEPTH: 9'
DRILLING METHOD(S): 4 1/4" HSA
BORING DIAMETER(S): 8"

POW DEPTH: 9'
INSTALLATION STARTED: 12/20/98
INSTALLATION COMPLETED: 12/20/98
SURFACE COMPLETION DATE: 1/7/99
COMPLETION CONTRACTOR/CREW: Maxim/Breeds
BEDROCK CONFIRMED: Y

ASSOCIATED SWMU/AOC: SEAD
COORDINATE SYSTEM: _____ NORTHING: _____ EASTING: _____
DATUM: _____ NGVD 1929
ELEVATIONS: PIN: _____ TOC: _____ TPC: _____

PROTECTIVE CASING:
TYPE: Steel DIAMETER: 4" LENGTH: 5'

RISER:
TR: -2.5' TYPE: PVC DIAMETER: 2" LENGTH: 6.1'

SCREEN:
TSC: 3.6' TYPE: PVC DIAMETER: 2" LENGTH: 4.6' SLOT SIZE: 10

POINT OF WELL:(SILT SUMP)
TYPE: PVC BSC: 8.2' POW: 9'

SURFACE SEAL: TYPE: Grout DIAMETER: 2' THICKNESS: 1'

GROUT: TG: 65 TYPE: Sand & Gravel LENGTH: 1.5'

SEAL: TBS: 1.5' TYPE: Bentonite LENGTH: 1.5'

SAND PACK: TSP: 3.0', 3.5' TYPE: #00, #0 LENGTH: 6.0'

COMMENTS:

LEGEND (DEPTH TO):

TPC - TOP OF PROTECTIVE CASING:
TR - TOP OF RISER
PIN - SURVEYED GROUND SURFACE
TG - TOP OF GROUT
BD - BOTTOM OF DRILL HOLE
OV - BASE OF OVERBURDEN

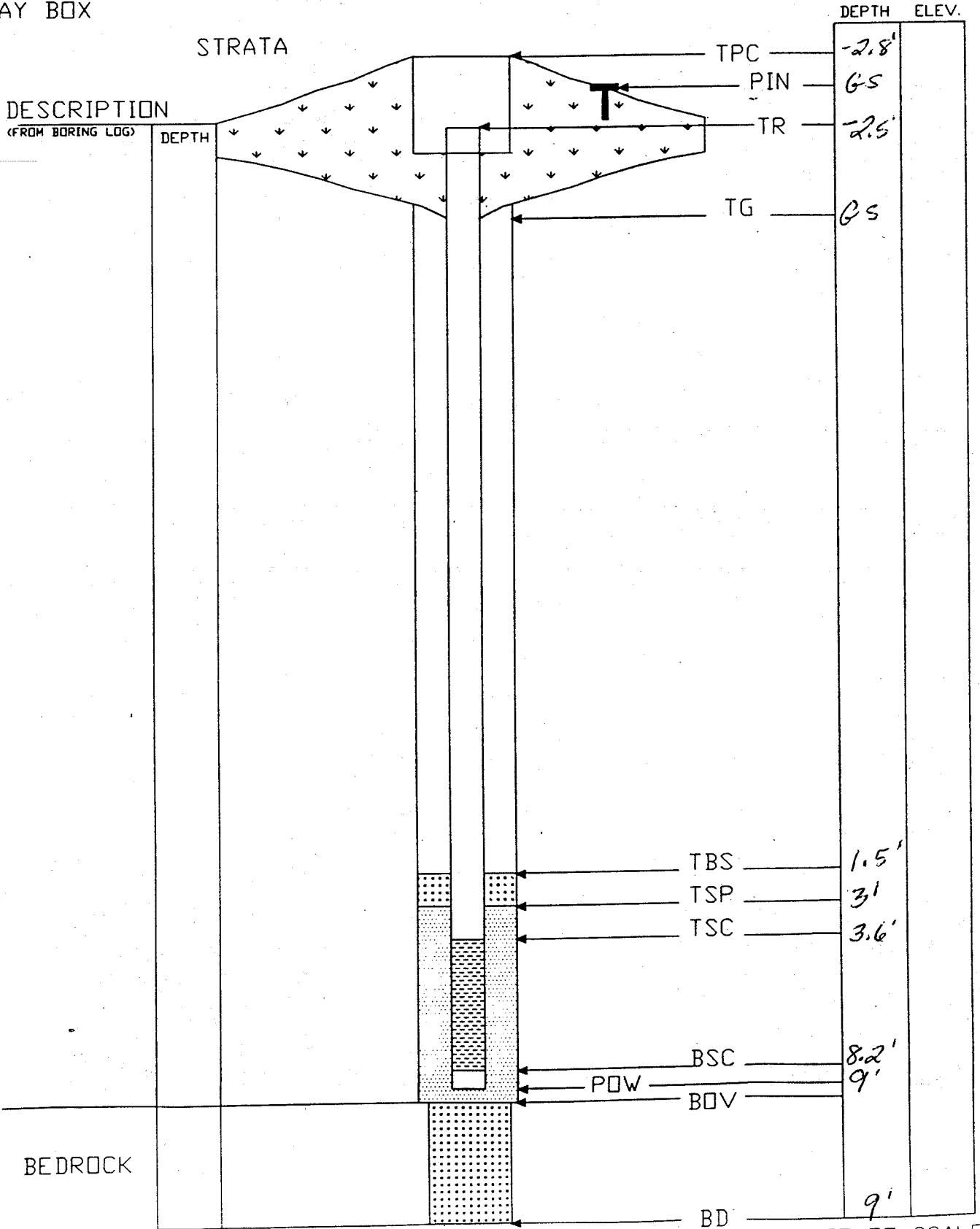
TBS - TOPOF BENTONITE SEAL
TSP - TOP OF SANDPACK
TSC - TOP OF SCREEN
BSC - BOTTOM OF SCREEN
POW - POINT OF WELL

* ALL MEASUREMENTS REFERENCED TO GROUND SURFACE

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

DATE INSTALLED: 12/20/98

ROADWAY BOX



* NOT TO SCALE

Parsons ES Inc.

WELL NUMBER: MW 4-12

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

CLIENT/PROJECT: Seneca Army Depot
LOCATION: Sead 4

PROJECT NO: 734539-01001
INSPECTOR: LLR
CHECKED BY: _____

DRILLING CONTRACTOR: Maxim
DRILLER: S. Breeds
DRILLING COMPLETED: 12/21/98
BORING DEPTH: 11'
DRILLING METHOD(S): 4 1/4" HSA
BORING DIAMETER(S): 8"

POW DEPTH: 11'
INSTALLATION STARTED: 12/21/98
INSTALLATION COMPLETED: 12/21/98
SURFACE COMPLETION DATE: 1/7/99
COMPLETION CONTRACTOR/CREW: Maxim/Breeds
BEDROCK CONFIRMED: Y

ASSOCIATED SWMU/AOC: SEAD
COORDINATE SYSTEM: _____
DATUM: NGVD 1929
ELEVATIONS: PIN: _____ TOC: _____

NORTHING: _____ EASTING: _____
TPC: _____

PROTECTIVE CASING:
TYPE: Steel DIAMETER: 4" LENGTH: 5'

RISER:
TR: -2.4' TYPE: PVC DIAMETER: 2" LENGTH: 8.0'

SCREEN:
TSC: 5.6' TYPE: PVC DIAMETER: 2" LENGTH: 4.6' SLOT SIZE: 10

POINT OF WELL:(SILT SUMP)
TYPE: PVC BSC: 10.2' POW: 11'

SURFACE SEAL: TYPE: Grout DIAMETER: 2' THICKNESS: 1'

GROUT: TG: 6.5 TYPE: Sand & Gravel LENGTH: 2.6'

SEAL: TBS: 2.6' TYPE: Bentonite LENGTH: 2.0'

SAND PACK: TSP: 4.6', 5.6' TYPE: #00, #0 LENGTH: 6.4'

COMMENTS:

LEGEND (DEPTH TO):

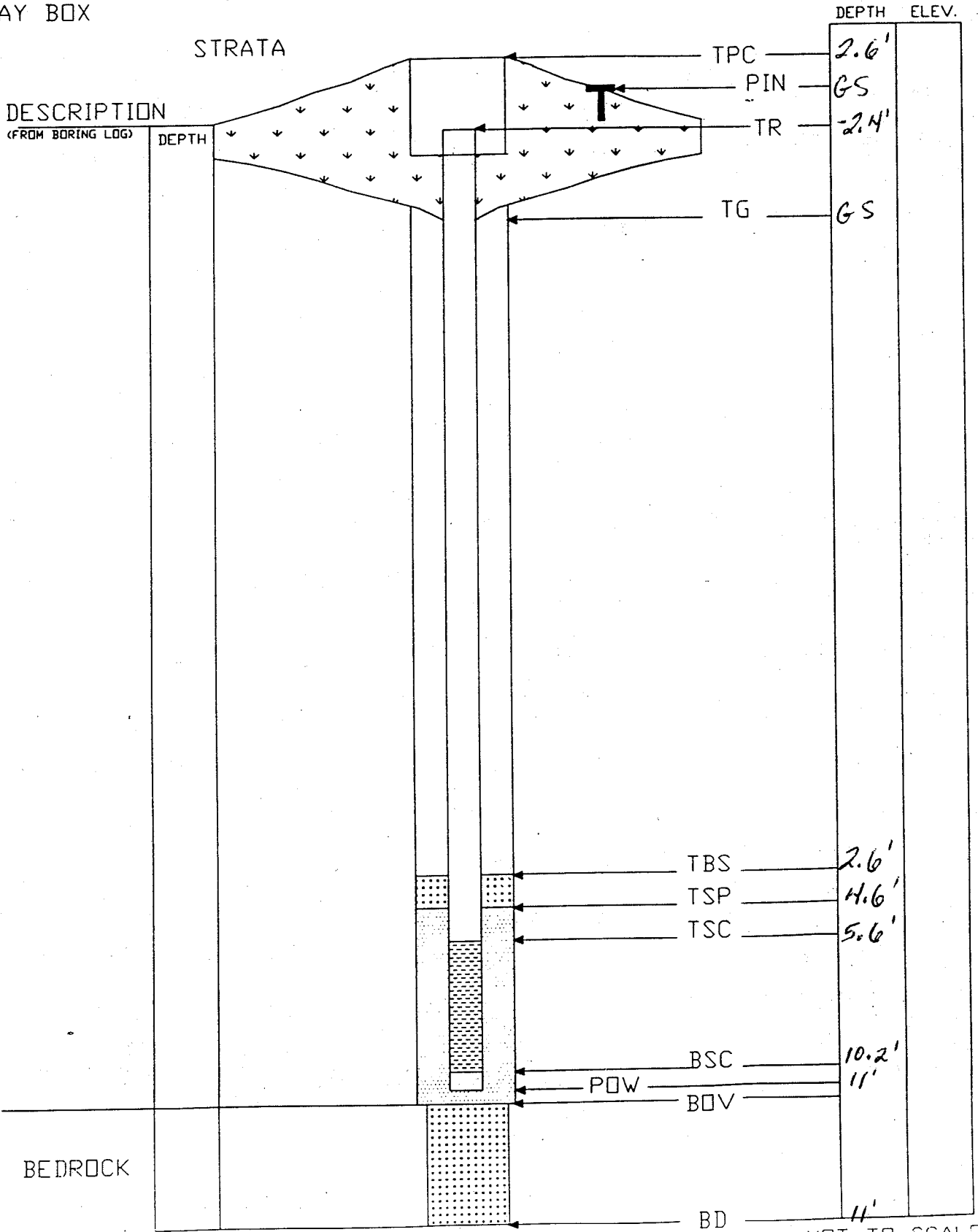
TPC-TOP OF PROTECTIVE CASING:
TR-TOP OF RISER
PIN-SURVEYED GROUND SURFACE
TG-TOP OF GROUT
BD-BOTTOM OF DRILL HOLE
BOV-BASE OF OVERBURDEN

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

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

DATE INSTALLED: 12/21/98
ROADWAY BOX



NOT TO SCALE

Parsons ES Inc.

WELL NUMBER: MW 4-13

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

CLIENT/PROJECT: Seneca Army Depot
LOCATION: Sec 4

PROJECT NO: 734539-01001
INSPECTOR: _____
CHECKED BY: _____

DRILLING CONTRACTOR: Maxim
DRILLER: S. Breeds
DRILLING COMPLETED: 12/20/98
BORING DEPTH: 6.7'
DRILLING METHOD(S): 4 1/2" HSA
BORING DIAMETER(S): 8"

POW DEPTH: 6.8'
INSTALLATION STARTED: 12/20/98
INSTALLATION COMPLETED: 12/20/98
SURFACE COMPLETION DATE: 1/7/99
COMPLETION CONTRACTOR/CREW: Maxim/Breeds
BEDROCK CONFIRMED: Y

ASSOCIATED SWMU/AOC: SEAD
COORDINATE SYSTEM: _____ NORTHING: _____ EASTING: _____
DATUM: _____ NGVD 1929
ELEVATIONS: PIN: _____ TOC: _____ TPC: _____

PROTECTIVE CASING:
TYPE: Steel DIAMETER: 4" LENGTH: 5'

RISER:
TR: -2.3' TYPE: PVC DIAMETER: 2" LENGTH: 6.2'

SCREEN:
TSC: 3.9' TYPE: PVC DIAMETER: 2" LENGTH: 2' SLOT SIZE: 10

POINT OF WELL:(SILT SUMP)
TYPE: PVC BSC: 5.9' POW: 6.7'

SURFACE SEAL: TYPE: Grout DIAMETER: 2' THICKNESS: 1'

GROUT: TG: 6.5 TYPE: Sand + Gravel LENGTH: 1'

SEAL: TBS: 1' TYPE: Bentonite LENGTH: 1.5'

SAND PACK: TSP: 2.5', 3.0' TYPE: #00, #0 LENGTH: 4.2'

COMMENTS:

LEGEND (DEPTH TO):

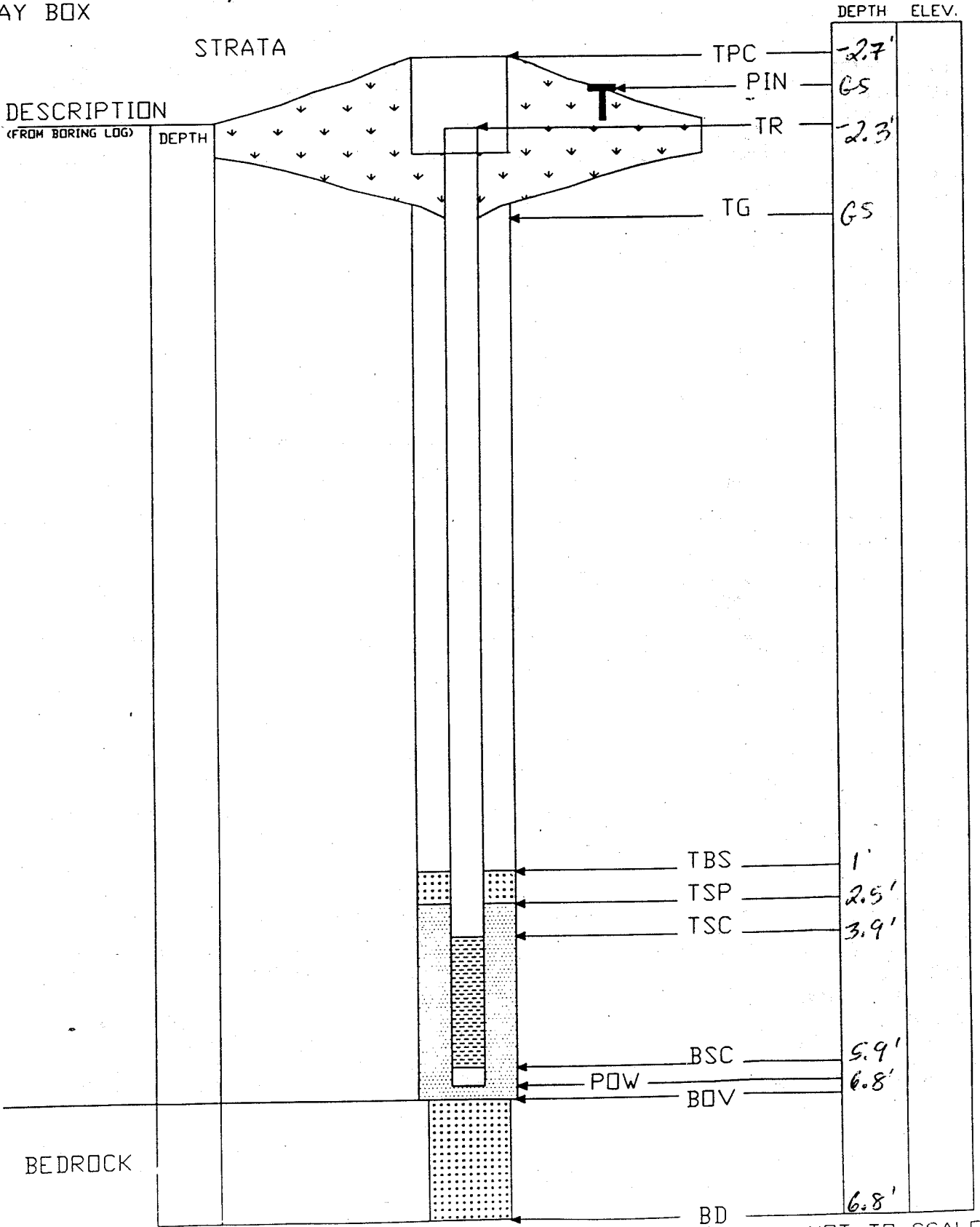
TPC - TOP OF PROTECTIVE CASING
TR - TOP OF RISER
PIN - SURVEYED GROUND SURFACE
TG - TOP OF GROUT
BD - BOTTOM OF DRILL HOLE
POV - BASE OF OVERBURDEN

TBS - TOP OF BENTONITE SEAL
TSP - TOP OF SANDPACK
TSC - TOP OF SCREEN
BSC - BOTTOM OF SCREEN
POW - POINT OF WELL

* ALL MEASUREMENTS REFERENCED TO GROUND SURFACE

OVERBURDEN MONITORING WELL
COMPLETION REPORT & INSTALLATION DETAIL

DATE INSTALLED: 12/20/98
ROADWAY BOX



* NOT TO SCALE

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 WELL INSTALLATION COMPLETED: 03/16/94	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 CHECKED BY: KK
--	--

STRATA	SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																								
				TPC	PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 3.8 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 2, 4																																								
				TR																																									
				TC																																									
			0.0	GS 738.4																																									
OL					SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 1.4 SANDPACK Type: #1, #3 Interval: 8.95																																								
GM																																													
ML			1.5	TBS 736.9																																									
-																																													
ML			2.9	TSP 735.5																																									
CL																																													
ML-CL			4.3	TSC 734.1																																									
ML-CL																																													
-			5																																										
ML																																													
-																																													
ML																																													
SM																																													
SM			11.0	BSC 727.4																																									
-																																													
			11.9	POW 726.6																																									
			11.9																																										
					WELL DEVELOPMENT DATA Date: 3/19/94 Method: BAIL Duration: 2 DAYS Rate: 1.5 L/MIN																																								
					WATER LEVELS <table border="1" style="font-size: small;"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>3/18</td> <td>1500</td> <td>3.36</td> </tr> <tr> <td>3/19</td> <td>1140</td> <td>3.78</td> </tr> <tr> <td>3/19</td> <td>1300</td> <td>9.40</td> </tr> </tbody> </table>	Date	Time	Depth, TR	3/18	1500	3.36	3/19	1140	3.78	3/19	1300	9.40																												
Date	Time	Depth, TR																																											
3/18	1500	3.36																																											
3/19	1140	3.78																																											
3/19	1300	9.40																																											
					Final Measurements: <table border="1" style="font-size: small;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td>7.12</td> <td>6.0</td> <td>650</td> <td>1.21</td> </tr> </tbody> </table>	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.12	6.0	650	1.21																																
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																										
7.12	6.0	650	1.21																																										
					LEGEND <table border="0" style="font-size: x-small;"> <tr> <td></td> <td>GRAVEL</td> <td>TPC</td> <td>TOP OF PROTECTIVE CASING</td> </tr> <tr> <td></td> <td>SURFACE SEAL</td> <td>TR</td> <td>TOP OF WELL RISER</td> </tr> <tr> <td></td> <td>GROUT</td> <td>GS</td> <td>GROUND SURFACE</td> </tr> <tr> <td></td> <td>SEAL</td> <td>TG</td> <td>TOP OF GROUT</td> </tr> <tr> <td></td> <td>SANDPACK</td> <td>TBS</td> <td>TOP BENTONITE SEAL</td> </tr> <tr> <td></td> <td>SAND</td> <td>TSP</td> <td>TOP OF SANDPACK</td> </tr> <tr> <td></td> <td>SILT</td> <td>TSC</td> <td>TOP OF SCREEN</td> </tr> <tr> <td></td> <td>CLAY</td> <td>BSC</td> <td>BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td>NO RECOVERY</td> <td>TD</td> <td>TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td>POW</td> <td>POINT OF WELL</td> </tr> </table>		GRAVEL	TPC	TOP OF PROTECTIVE CASING		SURFACE SEAL	TR	TOP OF WELL RISER		GROUT	GS	GROUND SURFACE		SEAL	TG	TOP OF GROUT		SANDPACK	TBS	TOP BENTONITE SEAL		SAND	TSP	TOP OF SANDPACK		SILT	TSC	TOP OF SCREEN		CLAY	BSC	BOTTOM OF SCREEN		NO RECOVERY	TD	TOTAL DEPTH			POW	POINT OF WELL
	GRAVEL	TPC	TOP OF PROTECTIVE CASING																																										
	SURFACE SEAL	TR	TOP OF WELL RISER																																										
	GROUT	GS	GROUND SURFACE																																										
	SEAL	TG	TOP OF GROUT																																										
	SANDPACK	TBS	TOP BENTONITE SEAL																																										
	SAND	TSP	TOP OF SANDPACK																																										
	SILT	TSC	TOP OF SCREEN																																										
	CLAY	BSC	BOTTOM OF SCREEN																																										
	NO RECOVERY	TD	TOTAL DEPTH																																										
		POW	POINT OF WELL																																										

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 WELL INSTALLATION COMPLETED: 03/04/94	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 CHECKED BY: KK
--	--

STRATA	SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																																												
				TPC	PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5																																																												
				TR																																																													
				TC																																																													
			0.0	GS		736.0																																																											
PT					RISER Diameter: 2 Type: SCH. 40-PVC Interval: 4 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 4, .9 SURFACE SEAL Type: CEMENT Interval: 1.8 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 1 SANDPACK Type: #1, #3 Interval: 7.2																																																												
ML-CL			1.8	TBS		734.2																																																											
SM			2.8	TSP		733.2																																																											
-			3.3	TSC		732.7																																																											
ML																																																																	
ML																																																																	
ML																																																																	
ML																																																																	
-																																																																	
ML			9.1	BSC		726.9																																																											
-		10.0	POW	726.0																																																													
					WELL DEVELOPMENT DATA Date: 3/8/94 Method: BAIL Duration: 85 MIN Rate: 2.1 L/MIN Final Measurements:																																																												
					WATER LEVELS <table border="1" style="font-size: small;"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>3/8</td> <td>1000</td> <td>2.71</td> </tr> <tr> <td>3/8</td> <td>1116</td> <td>3.18</td> </tr> </tbody> </table>	Date	Time	Depth, TR	3/8	1000	2.71	3/8	1116	3.18																																																			
Date	Time	Depth, TR																																																															
3/8	1000	2.71																																																															
3/8	1116	3.18																																																															
					<table border="1" style="font-size: small; width: 100%;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td>7.17</td> <td>4</td> <td>600</td> <td>2.42</td> </tr> </tbody> </table>	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.17	4	600	2.42																																																				
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																																														
7.17	4	600	2.42																																																														
					LEGEND <table border="0" style="font-size: x-small;"> <tr> <td></td> <td>SURFACE SEAL</td> <td></td> <td>SAND</td> <td>TPC</td> <td>TOP OF PROTECTIVE CASING</td> </tr> <tr> <td></td> <td>GROUT</td> <td></td> <td>SILT</td> <td>TR</td> <td>TOP OF WELL RISER</td> </tr> <tr> <td></td> <td>SEAL</td> <td></td> <td>CLAY</td> <td>GS</td> <td>GROUND SURFACE</td> </tr> <tr> <td></td> <td>SANDPACK</td> <td></td> <td>NO RECOVERY</td> <td>TG</td> <td>TOP OF GROUT</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>TBS</td> <td>TOP BENTONITE SEAL</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>TSP</td> <td>TOP OF SANDPACK</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>TSC</td> <td>TOP OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>BSC</td> <td>BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>TD</td> <td>TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>POW</td> <td>POINT OF WELL</td> </tr> </table>		SURFACE SEAL		SAND	TPC	TOP OF PROTECTIVE CASING		GROUT		SILT	TR	TOP OF WELL RISER		SEAL		CLAY	GS	GROUND SURFACE		SANDPACK		NO RECOVERY	TG	TOP OF GROUT					TBS	TOP BENTONITE SEAL					TSP	TOP OF SANDPACK					TSC	TOP OF SCREEN					BSC	BOTTOM OF SCREEN					TD	TOTAL DEPTH					POW	POINT OF WELL
	SURFACE SEAL		SAND	TPC	TOP OF PROTECTIVE CASING																																																												
	GROUT		SILT	TR	TOP OF WELL RISER																																																												
	SEAL		CLAY	GS	GROUND SURFACE																																																												
	SANDPACK		NO RECOVERY	TG	TOP OF GROUT																																																												
				TBS	TOP BENTONITE SEAL																																																												
				TSP	TOP OF SANDPACK																																																												
				TSC	TOP OF SCREEN																																																												
				BSC	BOTTOM OF SCREEN																																																												
				TD	TOTAL DEPTH																																																												
				POW	POINT OF WELL																																																												

COMPLETION REPORT OF WELL No. MW5-3

<p>PROJECT: EIGHT MODERATELY LOW PRIORITY AOCs</p> <p>PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY</p> <p>DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS</p> <p>DRILLING METHOD: HOLLOW STEM AUGER</p> <p>WELL INSTALLATION STARTED: 03/17/94</p> <p>WELL INSTALLATION COMPLETED: 03/17/94</p>	<p>WELL LOCATION (N/E): 998884.9 750255.7</p> <p>REFERENCE COORDINATE SYSTEM: NEW YORK STATE PLAN</p> <p>GROUND SURFACE ELEVATION (ft): 736.9</p> <p>DATUM: NAD 1983</p> <p>GEOLOGIST: F. O'LOUGHLIN</p> <p>CHECKED BY: KK</p>
---	--

STRATA	SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																													
MICRO DESCRIPTION (from boring log)	DEPTH (ft)																																																	
				TPC	PROTECTIVE COVER Diameter: 8 Type: ROADWAY BOX Interval: 1																																													
				TR																																														
				TC																																														
			0.0	GS 736.9																																														
ML			0.8	TBS 736.1	RISER Diameter: 2 Type: SCH. 40-PVC Interval: 2.9																																													
ML			2.5	TSP 734.4	SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 3.95																																													
SM ML ML-CL			3.5	TSC 733.4																																														
CL-ML					SURFACE SEAL Type: CEMENT Interval: .8 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE Interval: 1.7																																													
GM-GC	5		7.4	BSC 729.5																																														
CL																																																		
CL					SANDPACK Type: #1, #3 Interval: 6																																													
ML	8.8		8.5	POW 728.4																																														
					<table border="0" style="width: 100%;"> <tr> <th colspan="2">WELL DEVELOPMENT DATA</th> <th colspan="3">WATER LEVELS</th> </tr> <tr> <td>Date: 3/20/94</td> <td></td> <td>Date</td> <td>Time</td> <td>Depth, TR</td> </tr> <tr> <td>Method: BAIL/PUMP</td> <td style="text-align: center;">▽</td> <td>3/19</td> <td>1430</td> <td>3.33</td> </tr> <tr> <td>Duration: 2 DAYS</td> <td style="text-align: center;">▽</td> <td>3/19</td> <td>1550</td> <td>6.06</td> </tr> <tr> <td>Rate: .100 L/MIN</td> <td style="text-align: center;">▽</td> <td>3/20</td> <td>1020</td> <td>5.3</td> </tr> <tr> <td>Final Measurements:</td> <td style="text-align: center;">▽</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">pH</td> <td style="text-align: center;">Temperature (degrees C)</td> <td style="text-align: center;">Conductivity (micromhos/cm)</td> <td colspan="2" style="text-align: center;">Turbidity (NTU)</td> </tr> <tr> <td style="text-align: center;">7.00</td> <td style="text-align: center;">5</td> <td style="text-align: center;">900</td> <td colspan="2" style="text-align: center;">11.6</td> </tr> </table>	WELL DEVELOPMENT DATA		WATER LEVELS			Date: 3/20/94		Date	Time	Depth, TR	Method: BAIL/PUMP	▽	3/19	1430	3.33	Duration: 2 DAYS	▽	3/19	1550	6.06	Rate: .100 L/MIN	▽	3/20	1020	5.3	Final Measurements:	▽									pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)		7.00	5	900	11.6	
WELL DEVELOPMENT DATA		WATER LEVELS																																																
Date: 3/20/94		Date	Time	Depth, TR																																														
Method: BAIL/PUMP	▽	3/19	1430	3.33																																														
Duration: 2 DAYS	▽	3/19	1550	6.06																																														
Rate: .100 L/MIN	▽	3/20	1020	5.3																																														
Final Measurements:	▽																																																	
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																															
7.00	5	900	11.6																																															
<table border="0" style="width: 100%;"> <tr> <td style="width: 20%;">LEGEND</td> <td style="width: 20%;"> GRAVEL SAND SILT CLAY NO RECOVERY </td> <td style="width: 20%;"> TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TG TOP OF GROUT TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL </td> </tr> </table>						LEGEND	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TG TOP OF GROUT TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL																																										
LEGEND	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TG TOP OF GROUT TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL																																																

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW11-1

PROJECT: 10 SWMU -
LOCATION: SEAD -11

PROJECT NO: _____
INSPECTOR: ES/LB
CHECKED BY: _____

DRILLING CONTRACTOR: Empire
DRILLER: Alan
DRILLING COMPLETED: 11/3/93
BORING DEPTH: 14.2'
DRILLING METHOD(S): HSA
BORING DIAMETER(S): 8 1/2"
ASSOCIATED SWMU/AOC: _____

POW DEPTH: 14.2'
INSTALLATION STARTED: 11/3/93
INSTALLATION COMPLETED: 11/3/93
SURFACE COMPLETION DATE: 11/3/93
COMPLETION CONTRACTOR/CREW: Empire
BEDROCK CONFIRMED (Y/N?): _____
ESTIMATED GROUND ELEVATION: _____

PROTECTIVE SURFACE CASING:
DIAMETER: 4" x 4" steel LENGTH: 5'

RISER:
TR: _____ TYPE: PVC-40 DIAMETER: 2" LENGTH: _____

SCREEN:
TSC: 6.1' TYPE: PVC-40 DIAMETER: 2" LENGTH: 3' SLOT SIZE: 0.01"

POINT OF WELL (SILT SUMP)
TYPE: PVC point BSC: 13.5' POW: 14.2' 3.5' point

GROUT:
TG: 0.0 TYPE: cem 3 LENGTH: 3.0

SEAL:
TBS: 3.6' TYPE: Portland LENGTH: 1.0

SAND PACK:
TSP: 4.6' #1 TYPE: #3 Silica LENGTH: 0

SURFACE COLLAR:
TYPE: grout RADIUS: 2.2' THICKNESS CENTER: ' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS
DEPTH 1: - DEPTH 2: - DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

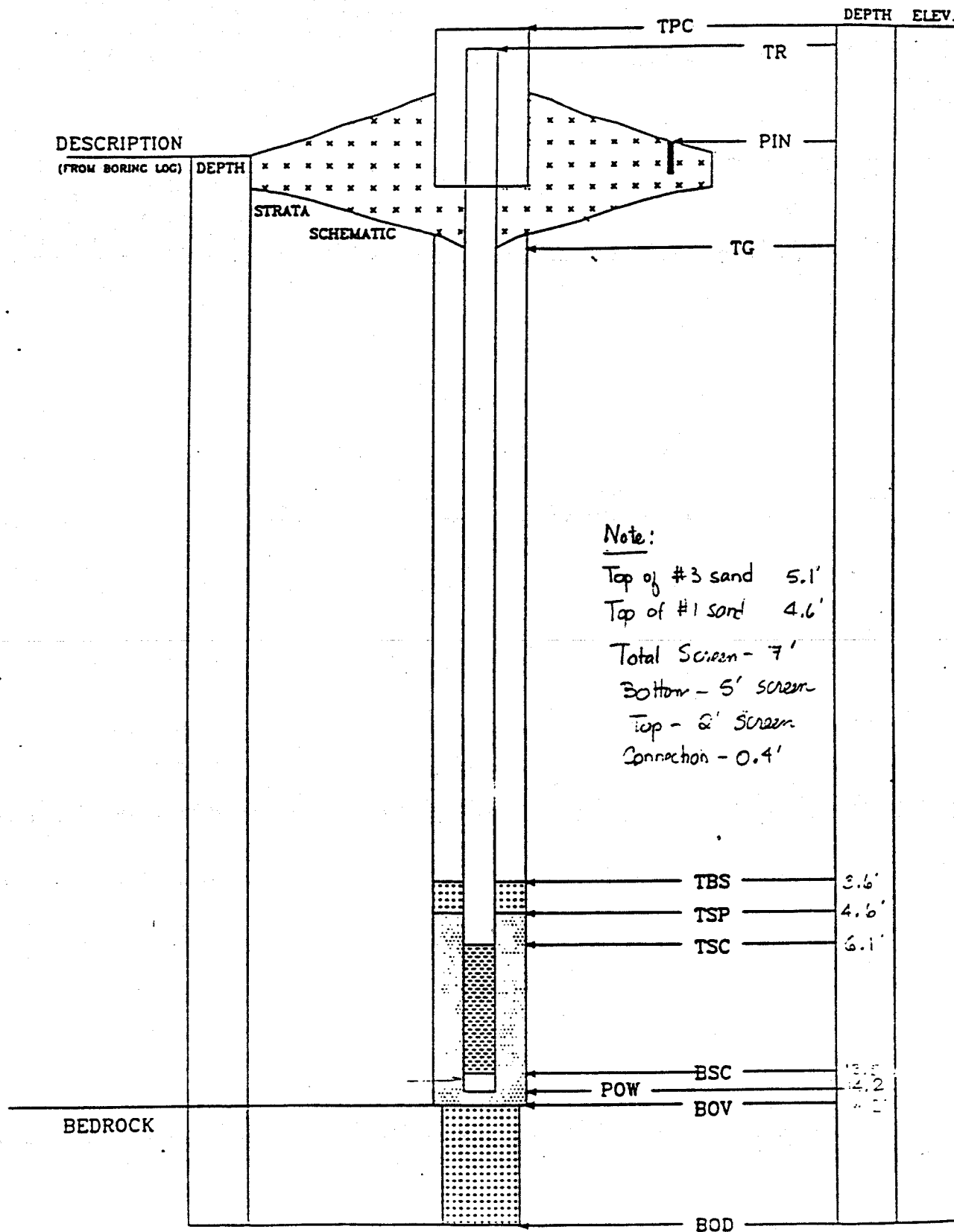
OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT: *ACOE*

WELL #: *MW11-1*

DATE: _____



depths measured from ground surface.

• NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL ROADWAY BOX - SURFACE COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW11-2

PROJECT: 10 SWMU
LOCATION: SEAD 11

PROJECT NO: _____
INSPECTOR: ES
CHECKED BY: _____

DRILLING CONTRACTOR: Empire
DRILLER: John W.
DRILLING COMPLETED: 11/16/93
BORING DEPTH: 8.5'
DRILLING METHOD(S): HSA
BORING DIAMETER(S): 8 1/2"
ASSOCIATED SWMU/AOC: 11

POW DEPTH: 8.5'
INSTALLATION STARTED: 11/16/93
INSTALLATION COMPLETED: 11/16/93
SURFACE COMPLETION DATE: 11/16/93
COMPLETION CONTRACTOR/CREW: Empire
BEDROCK CONFIRMED (Y/N?): _____
ESTIMATED GROUND ELEVATION: _____

PROTECTIVE SURFACE CASING:
DIAMETER: 4" x 4" Steel LENGTH: _____

RISER:
TR: _____ TYPE: PVC-40 DIAMETER: 2" LENGTH: _____

SCREEN:
TSC: 34 TYPE: PVC-40 DIAMETER: 1 1/2" LENGTH: 4' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)
TYPE: PVC point BSC: 7.4 POW: 8.5'

GROUT:
TG: Ground TYPE: Cement-bentonite LENGTH: 1.8'

SEAL:
TBS: 1.8' TYPE: bentonite pellets LENGTH: 0.6'

SAND PACK:
TSP: 2.4 TYPE: #3 + #1 LENGTH: 6.7'

SURFACE COLLAR:
TYPE: Cement RADIUS: 2' x 2' THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS
DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

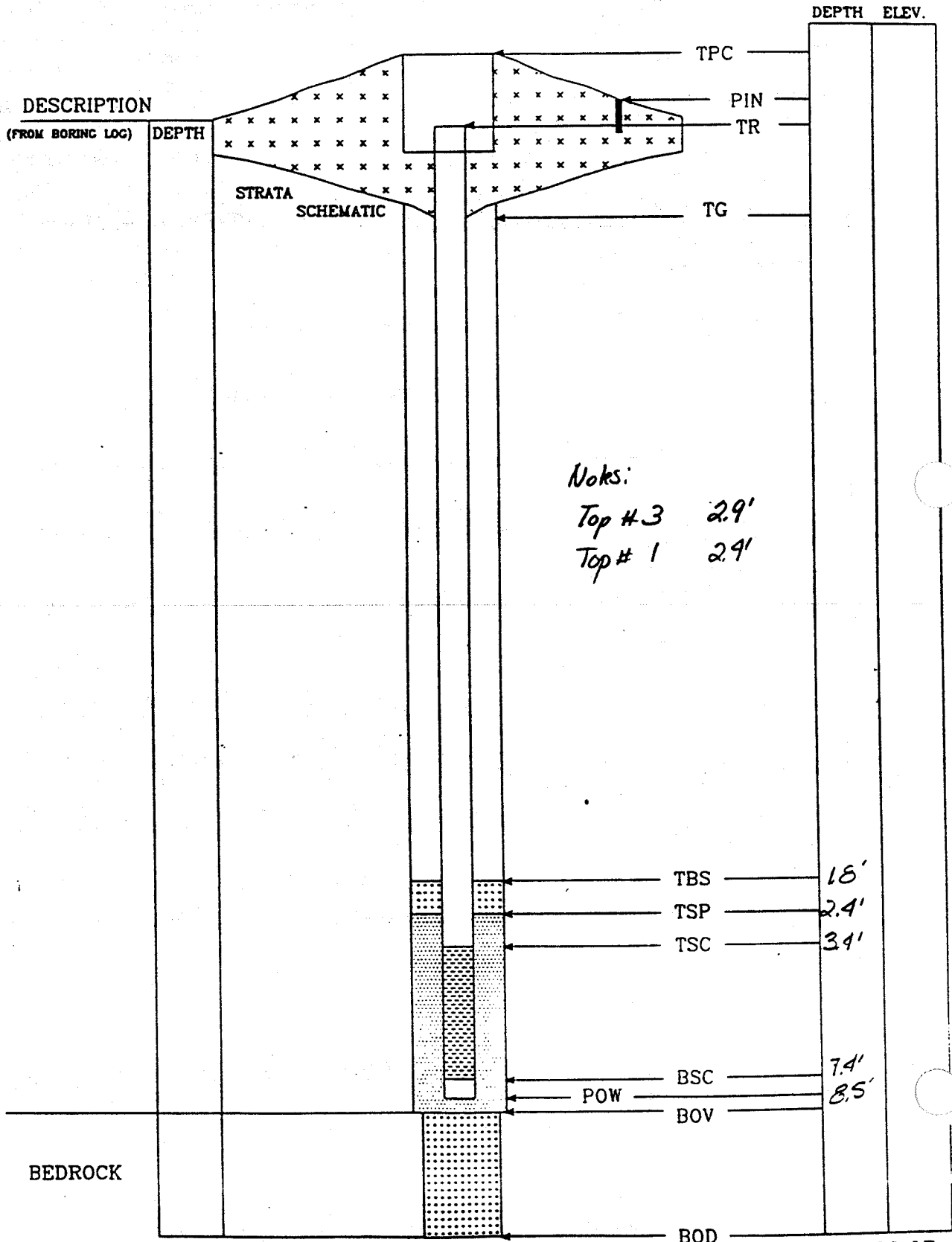
**OVERBURDEN MONITORING WELL
ROADWAY BOX INSTALLATION DETAIL**

ENGINEERING-SCIENCE, INC.

CLIENT: *ACOE*

WELL #: *MW11-2*

DATE: *11/16/93*



Note: All depths to ground surface.

*** NOT TO SCALE**

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT:		WELL #: MW-11-3	
PROJECT: <u>10-SWmu</u>		PROJECT NO: _____	
LOCATION: <u>SEAD .11</u>		INSPECTOR: <u>ES/LB</u>	
		CHECKED BY: _____	
DRILLING CONTRACTOR: <u>Empire</u>		POW DEPTH: <u>9.0'</u>	
DRILLER: <u>A1</u>		INSTALLATION STARTED: <u>11/4/93</u>	
DRILLING COMPLETED: <u>11/4/93</u>		INSTALLATION COMPLETED: <u>11/5/93</u>	
BORING DEPTH: <u>9.0'</u>		SURFACE COMPLETION DATE: <u>11/5/93</u>	
DRILLING METHOD(S): <u>HSA</u>		COMPLETION CONTRACTOR/CREW: _____	
BORING DIAMETER(S): <u>8 1/2"</u>		BEDROCK CONFIRMED (Y/N?): _____	
ASSOCIATED SWMU/AOC: <u>11</u>		ESTIMATED GROUND ELEVATION: _____	
PROTECTIVE SURFACE CASING:			
DIAMETER: <u>4" x 4" Steel</u>		LENGTH: <u>4' total length</u>	
RISER:			
TR: _____	TYPE: <u>PVC-40</u>	DIAMETER: <u>2"</u>	LENGTH: _____
SCREEN:			
TSC: <u>39'</u>	TYPE: <u>PVC-40</u>	DIAMETER: <u>2"</u>	LENGTH: <u>4.0'</u> SLOT SIZE: <u>0.01"</u>
POINT OF WELL: (SILT SUMP)			
TYPE: <u>PVC point</u>	BSC: <u>7.9'</u>	POW: <u>9.0'</u>	<u>11' betw. Pow and BSC.</u>
GROUT:			
TG: <u>NA</u>	TYPE: _____	LENGTH: _____	
SEAL:			
TBS: <u>near surface</u>	TYPE: <u>bentonite pellets</u>	LENGTH: <u>24'</u>	
SAND PACK:			
TSP: <u>2.4' → #1 29 #3</u>	TYPE: <u>#3 sand #1</u>	LENGTH: <u>6.6'</u>	
SURFACE COLLAR:			
TYPE: <u>Cement</u>	RADIUS: <u>2' x 2'</u>	THICKNESS CENTER: <u>1'</u>	THICKNESS EDGE: <u>1'</u>
CENTRALIZER DEPTHS			
DEPTH 1: _____	DEPTH 2: _____	DEPTH 3: _____	DEPTH 4: _____
COMMENTS:			
<p><u>Well screen is 4.0'</u> <u>Depth to POW from BSC 11' } note change</u></p>			
* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE			

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

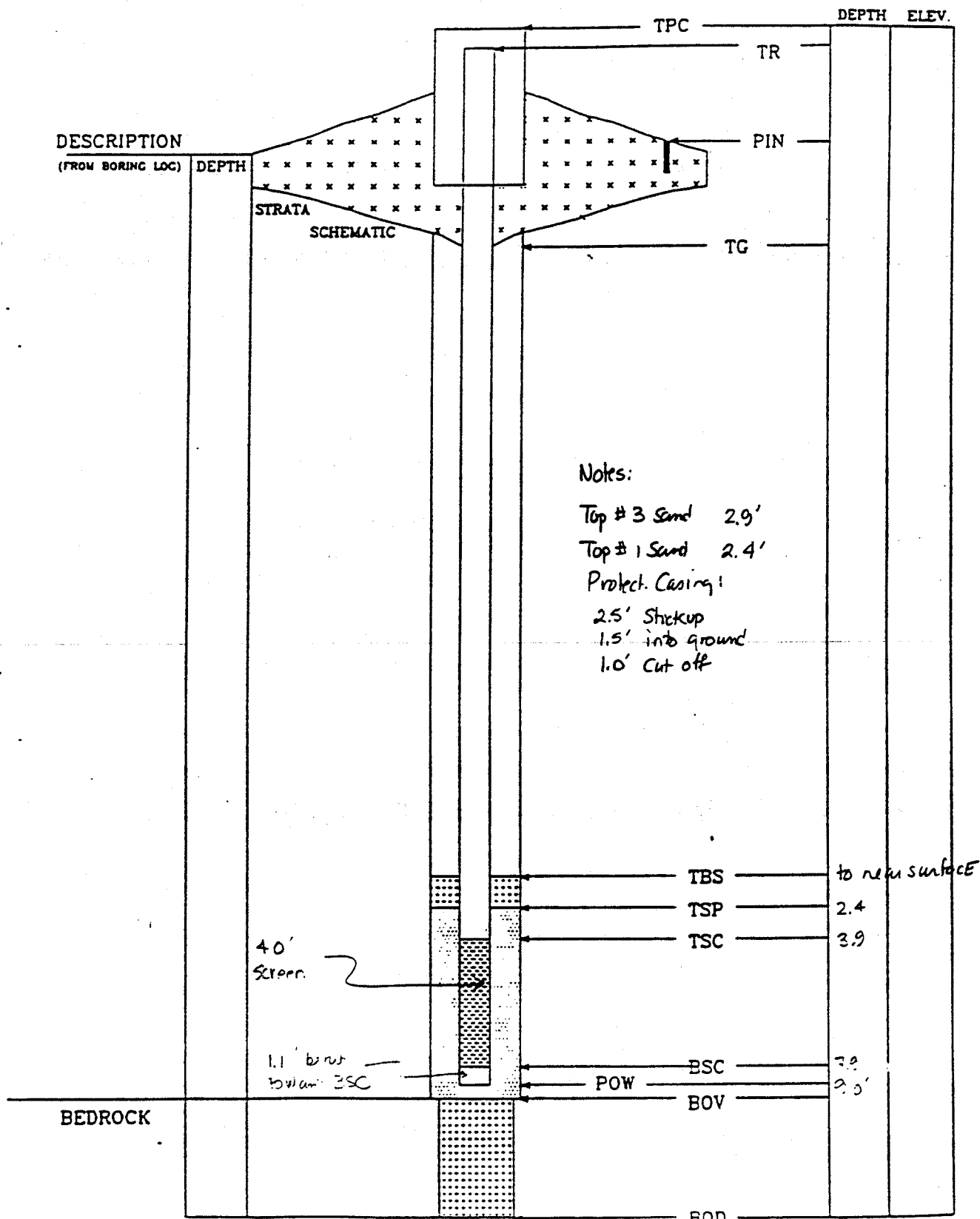
OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT:

WELL #: MW11-3

DATE: _____



Notes:

- Top # 3 Sand 2.9'
- Top # 1 Sand 2.4'
- Protect. Casing!
- 2.5' Shrinkup
- 1.5' into ground
- 1.0' Cut off

All depths measured from ground surface

• NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT: _____ WELL #: MW11-4

PROJECT: 10 SWMU
LOCATION: SEAD-11

PROJECT NO: _____
INSPECTOR: E/S / LB
CHECKED BY: _____

DRILLING CONTRACTOR: EMPIRE
DRILLER: AL
DRILLING COMPLETED: 11/4/93
BORING DEPTH: 10.5'
DRILLING METHOD(S): HSA
BORING DIAMETER(S): 8 1/2"
ASSOCIATED SWMU/AOC: 11

POW DEPTH: 10.5'
INSTALLATION STARTED: 11/4/93
INSTALLATION COMPLETED: _____
SURFACE COMPLETION DATE: _____
COMPLETION CONTRACTOR/CREW: Empire
BEDROCK CONFIRMED (Y/N?): y
ESTIMATED GROUND ELEVATION: _____

PROTECTIVE SURFACE CASING:

DIAMETER: 4"x4" Steel LENGTH: '2.9' Stickup

RISER:

TR: _____ TYPE: PVC-40 DIAMETER: 2" LENGTH: 2.5'

SCREEN:

TSC: 4.8' TYPE: PVC-40 DIAMETER: 2" LENGTH: 5.0' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)

TYPE: PVC point BSC: 9.8' POW: 10.5' 0.5' point

GROUT:

TG: 0.0 TYPE: Cem-bentonite LENGTH: 2.8'

SEAL: TBS: 2.6' TYPE: bentonite pellets LENGTH: 0.5'

SAND PACK: TSP: 3.3' TYPE: #3 and #1 LENGTH: 7.2'

SURFACE COLLAR:

TYPE: Cement RADIUS: 2' 0" THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS

DEPTH 1: — DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

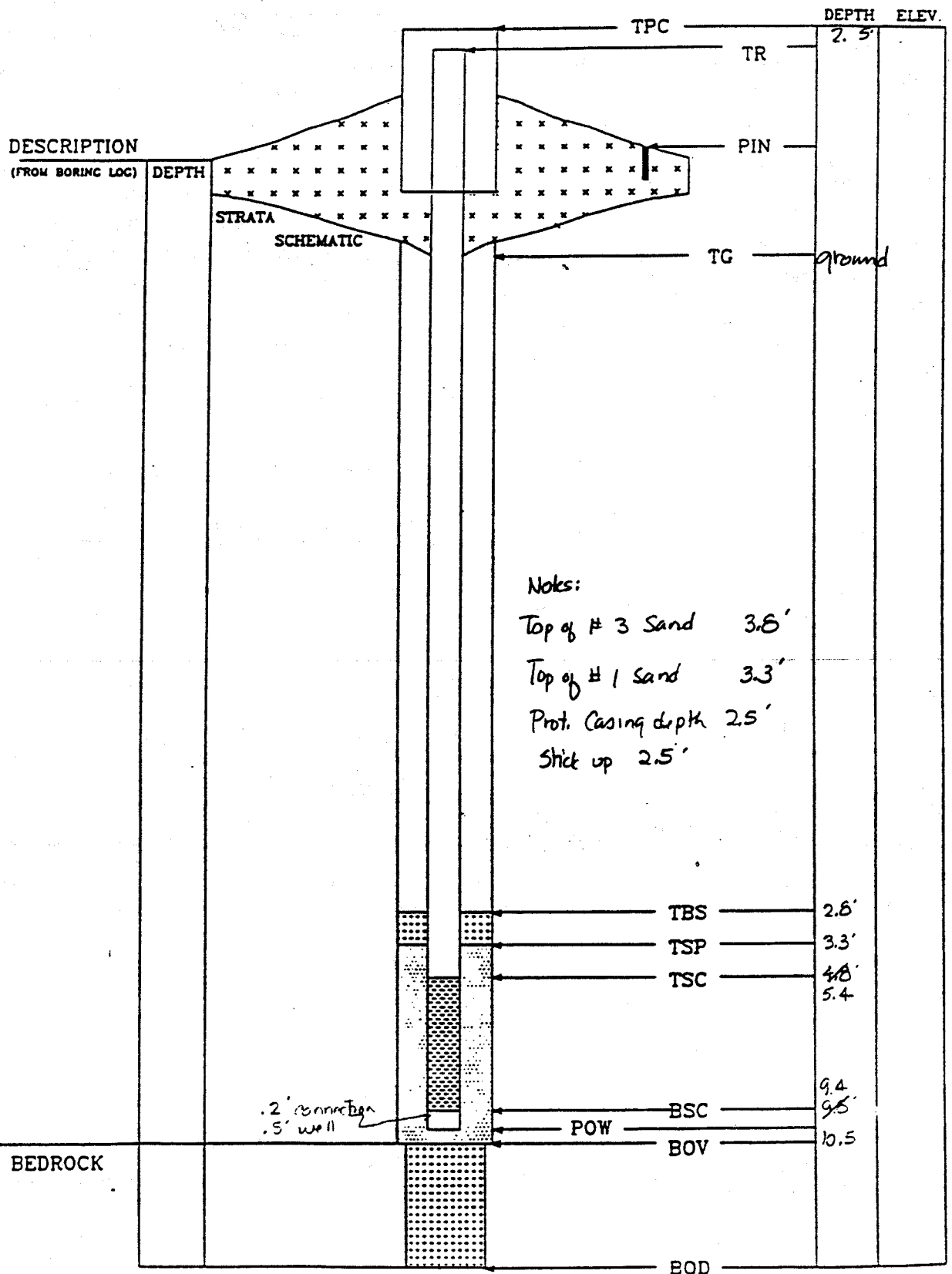
OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT: *ACOE*

WELL #: *MW11-4*

DATE: _____



Notes:
 Top of # 3 Sand 3.6'
 Top of # 1 Sand 3.3'
 Prot. casing depth 2.5'
 Stick up 2.5'

*.2' connection
.5' well*

depths measured from ground surface

• NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

PARSONS ENGINEERING SCIENCE, INC.		CLIENT:		WELL #: MW11-5	
PROJECT: <u>SEAD-11 ee/ca</u>			PROJECT NO: <u>734543-01001</u>		
LOCATION: <u>Seneca Army Depot</u>			INSPECTOR: <u>KKS</u>		
			CHECKED BY:		
DRILLING CONTRACTOR: <u>Parnet + Wolfe</u>		POW DEPTH: <u>9.5'</u>			
DRILLER: <u>Todd Mench</u>		INSTALLATION STARTED: <u>10/26/00</u>			
DRILLING COMPLETED: <u>10/26/00</u>		INSTALLATION COMPLETED: <u>10/26/00</u>			
BORING DEPTH: <u>11.0'</u>		SURFACE COMPLETION DATE: <u>10/27/00</u>			
DRILLING METHOD(S): <u>HSA</u>		COMPLETION CONTRACTOR/CREW: <u>Parnet + Wolfe</u>			
BORING DIAMETER(S): <u>10.0"</u>		BEDROCK CONFIRMED (Y/N?): <u>Y</u>			
ASSOCIATED SWMU/AOC: <u>SEAD-11</u>		ESTIMATED GROUND ELEVATION:			
PROTECTIVE SURFACE CASING:					
DIAMETER: <u>4.0"</u>		LENGTH: <u>4', 2"</u>		TOR: <u>+2.6</u>	
RISER:					
TOC: <u>+2.5</u>		TYPE: <u>2" Sched. 40</u>		DIAMETER: <u>2"</u> LENGTH: <u>6.74</u>	
SCREEN:					
TSC: <u>-4.24</u>		TYPE: <u>PVC wire wrap</u>		DIAMETER: <u>2"</u> LENGTH: <u>4.58</u> SLOT SIZE: <u>0.010</u>	
POINT OF WELL: (SILT SUMP)					
YPE: <u>Point - PVC</u>		BSC: <u>-8.82</u>		POW: <u>-9.5</u>	
GROUT:					
TG: <u>+0.5'</u>		TYPE: <u>Quickcrete</u>		LENGTH: <u>2.25'</u>	
SEAL: TBS: <u>-1.75</u>		TYPE: <u>Bentonite</u>		LENGTH: <u>2.0'</u>	
SAND PACK: TSP: <u>-3.75</u> <u>-4.25</u>		TYPE: <u>00</u>		LENGTH: <u>0.83'</u> (Above TSC)	
SURFACE COLLAR:					
TYPE: <u>Quickcrete</u>		RADIUS: <u>2.0'</u>		THICKNESS CENTER: <u>1.35</u> THICKNESS EDGE: <u>+0.25</u>	
CENTRALIZER DEPTHS					
DEPTH 1: <u>N/A</u>		DEPTH 2: <u>N/A</u>		DEPTH 3: <u>N/A</u> DEPTH 4: <u>N/A</u>	
COMMENTS:					

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

PARSONS ENGINEERING SCIENCE, INC.		CLIENT:	WELL #: MW11-6
PROJECT: <u>SEAD-11 ee/ca</u>	PROJECT NO: <u>734543-01001</u>		INSPECTOR: <u>KRS</u>
LOCATION: <u>Seneca Army Depot</u>	CHECKED BY: _____		
DRILLING CONTRACTOR: <u>Parnet Wolfe</u>	POW DEPTH: <u>8.08'</u>		
DRILLER: <u>Todd Menech</u>	INSTALLATION STARTED: <u>10/26/00</u>		
DRILLING COMPLETED: <u>10/26/00</u>	INSTALLATION COMPLETED: <u>10/26/00</u>		
BORING DEPTH: <u>8.5'</u>	SURFACE COMPLETION DATE: <u>10/27/00</u>		
DRILLING METHOD(S): <u>HSA</u>	COMPLETION CONTRACTOR/CREW: <u>P+W - Todd Menech</u>		
BORING DIAMETER(S): <u>10"</u>	BEDROCK CONFIRMED (Y/N?): <u>Y</u>		
ASSOCIATED SWMU/AOC: <u>SEAD-11</u>	ESTIMATED GROUND ELEVATION: _____		

PROTECTIVE SURFACE CASING:

DIAMETER: 4" ID LENGTH: 4' 2" TOR: +2.52

RISER:

TOC: +2.42' TYPE: PVC DIAMETER: 2" LENGTH: 5.25 (TOC)

SCREEN:

TSC: -2.82 TYPE: PVC wire wrap DIAMETER: 2" LENGTH: 4.58' SLOT SIZE: 0.010

POINT OF WELL: (SILT SUMP)

YPE: PVC Point BSC: -7.40 POW: 8.08

GROUT:

TG: +0.25' TYPE: Quickcrete LENGTH: 1.5'

SEAL: Emulsifying chips TBS: -1.32' TYPE: Bentonite LENGTH: 1.0'

SAND PACK:

TSP: -2.60
-2.32 TYPE: 0/00 LENGTH: Above TSC 0.5'

SURFACE COLLAR:

TYPE: Quickcrete RADIUS: 2.0' THICKNESS CENTER: 1.5 THICKNESS EDGE: 0.5

CENTRALIZER DEPTHS

DEPTH 1: N/A DEPTH 2: N/A DEPTH 3: N/A DEPTH 4: N/A

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

8.08
2.42

10.50

10.4

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

PARSONS ENGINEERING SCIENCE, INC.		CLIENT:		WELL #: MW 11-7	
PROJECT: <u>SEAD-11 00/00</u>			PROJECT NO: <u>734543-01001</u>		
LOCATION: <u>Seneca Army Depot</u>			INSPECTOR: <u>KKS</u>		
			CHECKED BY:		
DRILLING CONTRACTOR: <u>Parnet + Wolfe</u>		POW DEPTH: <u>5.25'</u>			
DRILLER: <u>Todd March</u>		INSTALLATION STARTED: <u>10/26/00</u>			
DRILLING COMPLETED: <u>10/26/00</u>		INSTALLATION COMPLETED: <u>10/26/00</u>			
BORING DEPTH: <u>6.0'</u>		SURFACE COMPLETION DATE: <u>10/27/00</u>			
DRILLING METHOD(S): <u>HSA</u>		COMPLETION CONTRACTOR/CREW: <u>P+W Todd</u>			
BORING DIAMETER(S): <u>10"</u>		BEDROCK CONFIRMED (Y/N?): <u>Y</u>			
ASSOCIATED SWMU/AOC: <u>SEAD-11</u>		ESTIMATED GROUND ELEVATION:			
PROTECTIVE SURFACE CASING:					
DIAMETER: <u>4.0" ID</u>		LENGTH: <u>4' 2"</u>		TOR: <u>2.66'</u>	
RISER:					
TOC: <u>+2.55</u>		TYPE: <u>PVC Sched. 40</u>		DIAMETER: <u>2"</u> LENGTH: <u>5.05'</u>	
SCREEN:					
TSC: <u>2.5'</u>		TYPE: <u>PVC wire wrap</u>		DIAMETER: <u>2"</u> LENGTH: <u>2.6'</u> SLOT SIZE: <u>0.010</u>	
POINT OF WELL: (SILT SUMP)					
YPE: <u>PVC-Flat Cap</u>		BSC: <u>5.10'</u>		POW: <u>5.25'</u>	
GROUT:					
TG: <u>+0.25'</u>		TYPE: <u>Quickcrete</u>		LENGTH: <u>1.35'</u>	
SEAL: TBS: <u>-1.1'</u>		TYPE: <u>Bentonite</u>		LENGTH: <u>1.5'</u>	
SAND PACK: TSP: <u>-1.6</u> <u>-1.4</u>		TYPE: <u>00</u>		LENGTH: <u>1.1'</u> (<u>Above TSC</u>)	
SURFACE COLLAR:					
TYPE: <u>Quickcrete</u>		RADIUS: <u>2.0'</u>		THICKNESS CENTER: <u>1.35'</u> THICKNESS EDGE: <u>0.25'</u>	
CENTRALIZER DEPTHS					
DEPTH 1: <u>N/A</u>		DEPTH 2: <u>N/A</u>		DEPTH 3: <u>N/A</u> DEPTH 4: <u>N/A</u>	
COMMENTS:					

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

COMPLETION REPORT OF WELL No. MW12A-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: **06/10/94**
 WELL INSTALLATION COMPLETED: **06/11/94**

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**
 CHECKED BY: **KK**

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
MICRO DESCRIPTION (from boring log)	DEPTH (ft)					
					TPC	PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 5 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 9 SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 1.4 SANDPACK Type: #1, #3 Interval: 11.1
	0			0.0	GS	
ML				1.5	TBS	
ML				2.9	TSP	
-				4.0	TSC	
ML				5		
-				10		
SM				13.0	BSC	
-				14.0	POW	
SM						
ML						
ML						
-						
-						
-						
-	14.0					

WELL DEVELOPMENT DATA		WATER LEVELS		
Date:	6/22/94	Date	Time	Depth, TR
Method:	BAIL	6/22	1130	6.30
Duration:	170 MIN	6/22	1525	6.42
Rate:	1.4 L/MIN			
Final Measurements:				
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	
7.24	9.5	590	26.1	

	SURFACE SEAL		GRAVEL	TPC	TOP OF PROTECTIVE CASING
	GROUT		SAND	TR	TOP OF WELL RISER
	SEAL		SILT	GS	GROUND SURFACE
	SANDPACK		CLAY	TG	TOP OF GROUT
			NO RECOVERY	TBS	TOP BENTONITE SEAL
				TSP	TOP OF SANDPACK
				TSC	TOP OF SCREEN
				BSC	BOTTOM OF SCREEN
				TD	TOTAL DEPTH
				POW	POINT OF WELL



ENGINEERING-SCIENCE, INC.

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

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

COMPLETION REPORT OF WELL No. MW12A-2

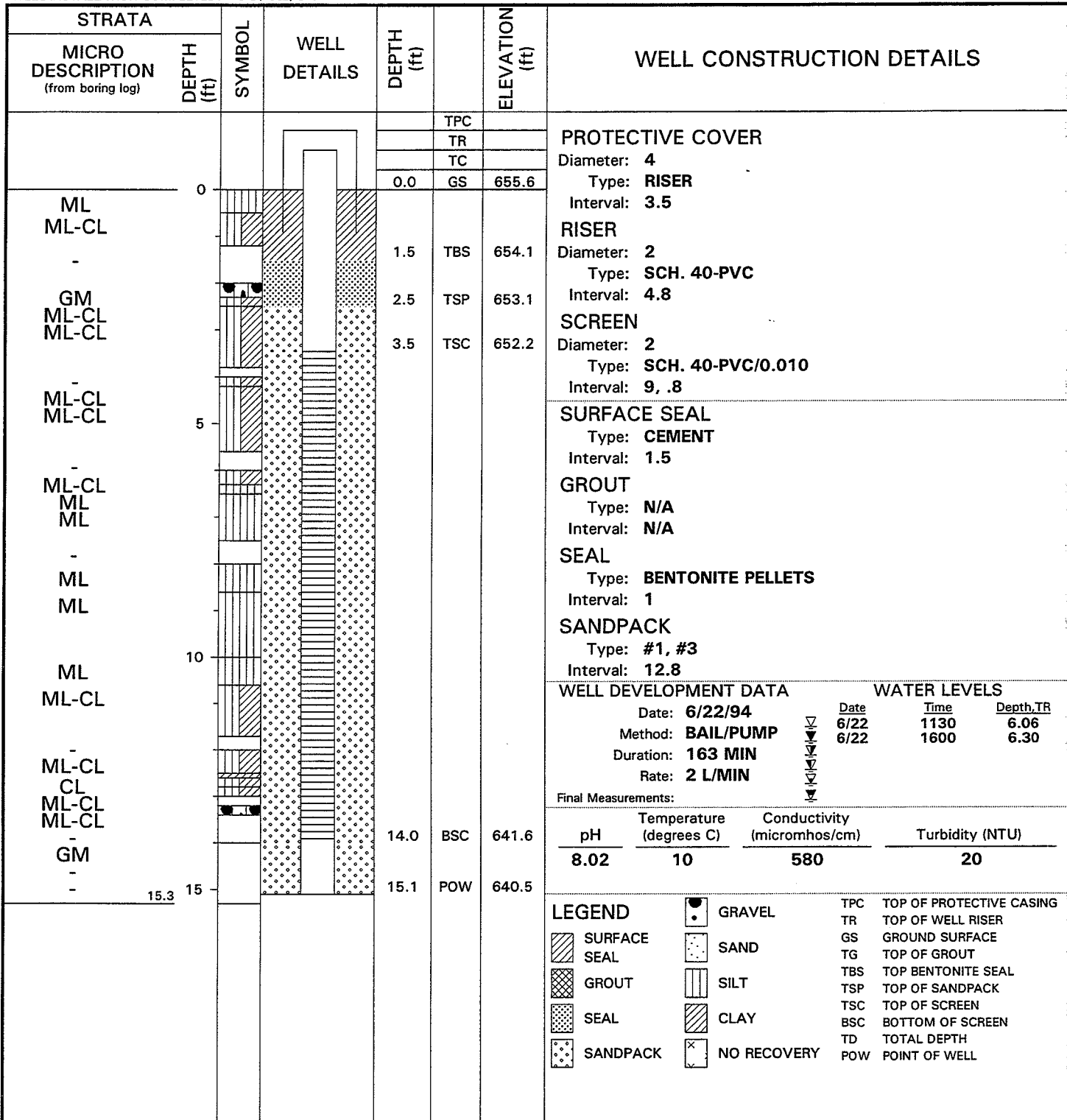
PROJECT: EIGHT MODERATELY LOW PRIORITY AOCs	WELL LOCATION (N/E): 1015117.5 744926.6
PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY	REFERENCE COORDINATE SYSTEM: New York State Plane
DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS	GROUND SURFACE ELEVATION (ft): 656.3
DRILLING METHOD: HOLLOW STEM AUGER	DATUM: NAD 1983
WELL INSTALLATION STARTED: 06/11/94	GEOLOGIST: F. O'LOUGHLIN
WELL INSTALLATION COMPLETED: 06/11/94	CHECKED BY: KK

STRATA	SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																	
				TPC	PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 5.35 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 3.95, 1.95																																	
				TR																																		
				TC																																		
			0.0	GS 656.3																																		
SM ML			1.5	TBS 654.8	SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 1.7 SANDPACK Type: #1, #3 Interval: 8.8																																	
ML-CL ML-CL			3.2	TSP 653.1																																		
ML-CL			4.3	TSC 652.0																																		
SM ML-CL																																						
ML-CL CL																																						
SM ML-CL																																						
ML-CL																																						
ML-CL																																						
ML																																						
			11.1	BSC 645.3	WELL DEVELOPMENT DATA <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="2"></th> <th colspan="3" style="text-align: center;">WATER LEVELS</th> </tr> <tr> <th>Date</th> <th>6/23/94</th> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>Method:</td> <td>BAIL</td> <td>6/23</td> <td>0930</td> <td>5.30</td> </tr> <tr> <td>Duration:</td> <td>130 MIN</td> <td>6/23</td> <td>1230</td> <td>5.36</td> </tr> <tr> <td>Rate:</td> <td>.1140 L/MIN</td> <td>6/23</td> <td>1430</td> <td>5.85</td> </tr> </tbody> </table> <p>Final Measurements:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">7.11</td> <td style="text-align: center;">8.5</td> <td style="text-align: center;">425</td> <td style="text-align: center;">4.94</td> </tr> </tbody> </table>			WATER LEVELS			Date	6/23/94	Date	Time	Depth, TR	Method:	BAIL	6/23	0930	5.30	Duration:	130 MIN	6/23	1230	5.36	Rate:	.1140 L/MIN	6/23	1430	5.85	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.11	8.5	425	4.94
		WATER LEVELS																																				
Date	6/23/94	Date	Time	Depth, TR																																		
Method:	BAIL	6/23	0930	5.30																																		
Duration:	130 MIN	6/23	1230	5.36																																		
Rate:	.1140 L/MIN	6/23	1430	5.85																																		
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																			
7.11	8.5	425	4.94																																			
			12.0	POW 644.3																																		

LEGEND	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TG TOP OF GROUT TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL
---------------	---	---

COMPLETION REPORT OF WELL No. MW12A-3

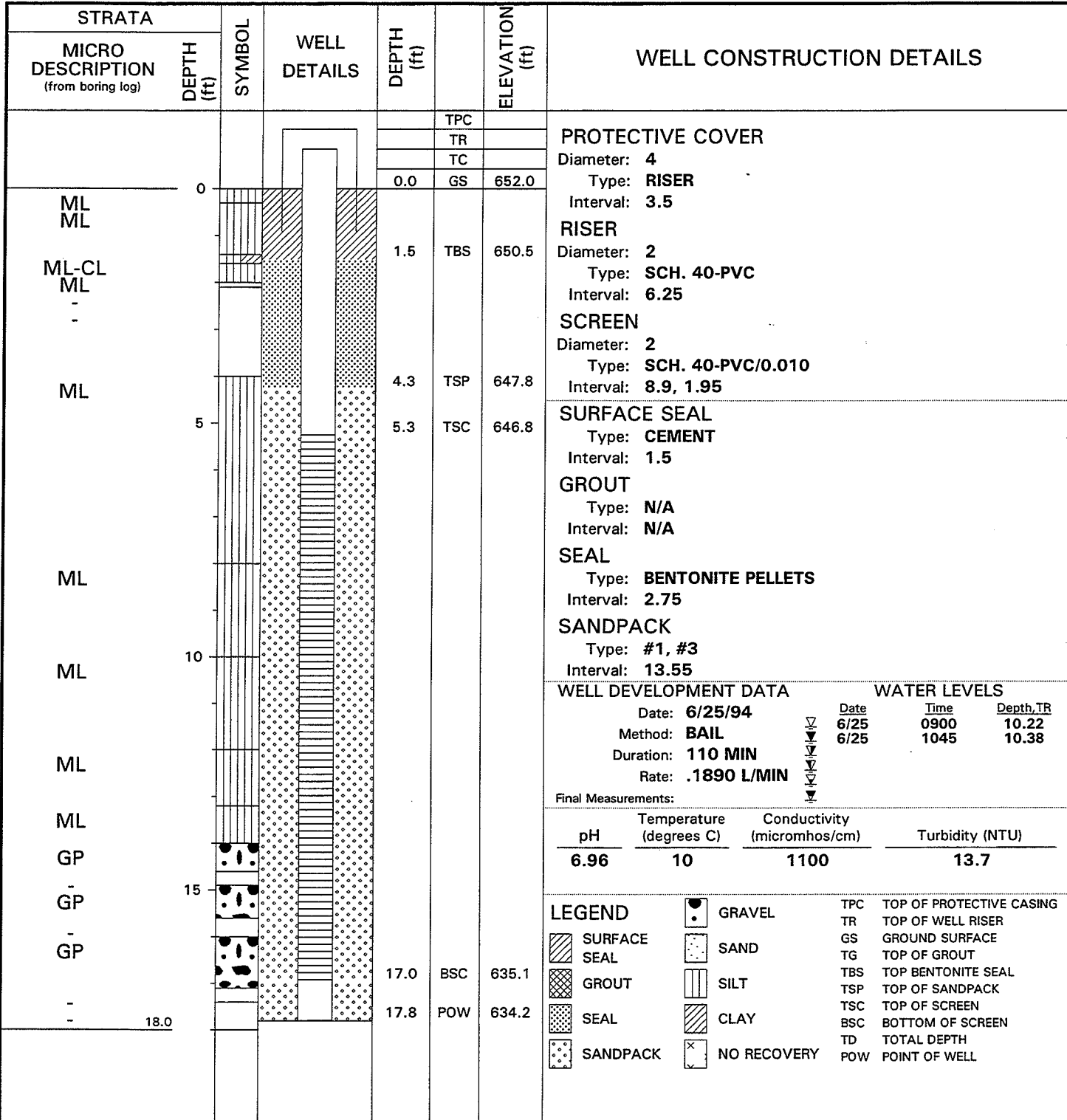
PROJECT:	EIGHT MODERATELY LOW PRIORITY AOCs	WELL LOCATION (N/E):	1015521.5 744532.2
PROJECT LOCATION:	SENECA ARMY DEPOT, ROMULUS NY	REFERENCE COORDINATE SYSTEM:	New York State Plane
DRILLING CONTRACTOR:	EMPIRE SOILS INVESTIGATIONS	GROUND SURFACE ELEVATION (ft):	655.6
DRILLING METHOD:	HOLLOW STEM AUGER	DATUM:	NAD 1983
WELL INSTALLATION STARTED:	06/12/94	GEOLOGIST:	F. O'LOUGHLIN
WELL INSTALLATION COMPLETED:	06/12/94	CHECKED BY:	KK



SURFACE SEAL	SAND	TPC TOP OF PROTECTIVE CASING
GROUT	SILT	TR TOP OF WELL RISER
SEAL	CLAY	GS GROUND SURFACE
SANDPACK	NO RECOVERY	TG TOP OF GROUT
		TBS TOP BENTONITE SEAL
		TSP TOP OF SANDPACK
		TSC TOP OF SCREEN
		BSC BOTTOM OF SCREEN
		TD TOTAL DEPTH
		POW POINT OF WELL

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 WELL INSTALLATION COMPLETED: 06/13/94	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 CHECKED BY: KK
--	---



	SURFACE SEAL		GRAVEL	TPC	TOP OF PROTECTIVE CASING
	GROUT		SAND	TR	TOP OF WELL RISER
	SEAL		SILT	GS	GROUND SURFACE
	SANDPACK		CLAY	TG	TOP OF GROUT
			NO RECOVERY	TBS	TOP BENTONITE SEAL
				TSP	TOP OF SANDPACK
				TSC	TOP OF SCREEN
				BSC	BOTTOM OF SCREEN
				TD	TOTAL DEPTH
				POW	POINT OF WELL

COMPLETION REPORT OF WELL No. MW12B-2

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCs	WELL LOCATION (N/E): 1015919.8 743522.9
PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY	REFERENCE COORDINATE SYSTEM: New York State Plane
DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS	GROUND SURFACE ELEVATION (ft): 648.1
DRILLING METHOD: HOLLOW STEM AUGER	DATUM: NAD 1983
WELL INSTALLATION STARTED: 06/12/94	GEOLOGIST: F. O'LOUGHLIN
WELL INSTALLATION COMPLETED: 06/12/94	CHECKED BY: KK

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
MICRO DESCRIPTION (from boring log)	DEPTH (ft)					
-	0			0.0	GS	648.1
ML		[Symbol]		1.5	TBS	646.6
-				3.0	TSP	645.1
-				3.9	TSC	644.2
ML	5					
-						
ML						
-						
ML	10					
ML						
ML						
SP						
SP						
-				12.9	BSC	635.2
GP				14.0	POW	634.1
-	14.0					

PROTECTIVE COVER	
Diameter: 4	Type: RISER
Interval: 3.5	
RISER	
Diameter: 2	Type: SCH. 40-PVC
Interval: 5	
SCREEN	
Diameter: 2	Type: SCH. 40-PVC/0.010
Interval: 9	
SURFACE SEAL	
Type: CEMENT	
Interval: 1.5	
GROUT	
Type: N/A	
Interval: N/A	
SEAL	
Type: BENTONITE PELLETS	
Interval: 1.55	
SANDPACK	
Type: #1, #3	
Interval: 11	

WELL DEVELOPMENT DATA		WATER LEVELS		
Date: 6/23/94	Method: BAIL	Date: 6/23	Time: 1545	Depth, TR: 7.15
Duration: 150 MIN	Rate: .1360 L/MIN	Date: 6/24	Time: 1030	Depth, TR: 7.36
		Date: 6/24	Time: 1235	Depth, TR: 7.20
Final Measurements:				
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	
7.15	9.5	800	43.3	

LEGEND	<ul style="list-style-type: none"> [Symbol] GRAVEL [Symbol] SAND [Symbol] SILT [Symbol] CLAY [Symbol] SANDPACK [Symbol] NO RECOVERY 	<ul style="list-style-type: none"> TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TG TOP OF GROUT TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL
---------------	---	---

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 INSTALLATION COMPLETED: 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
 CHECKED BY: KK

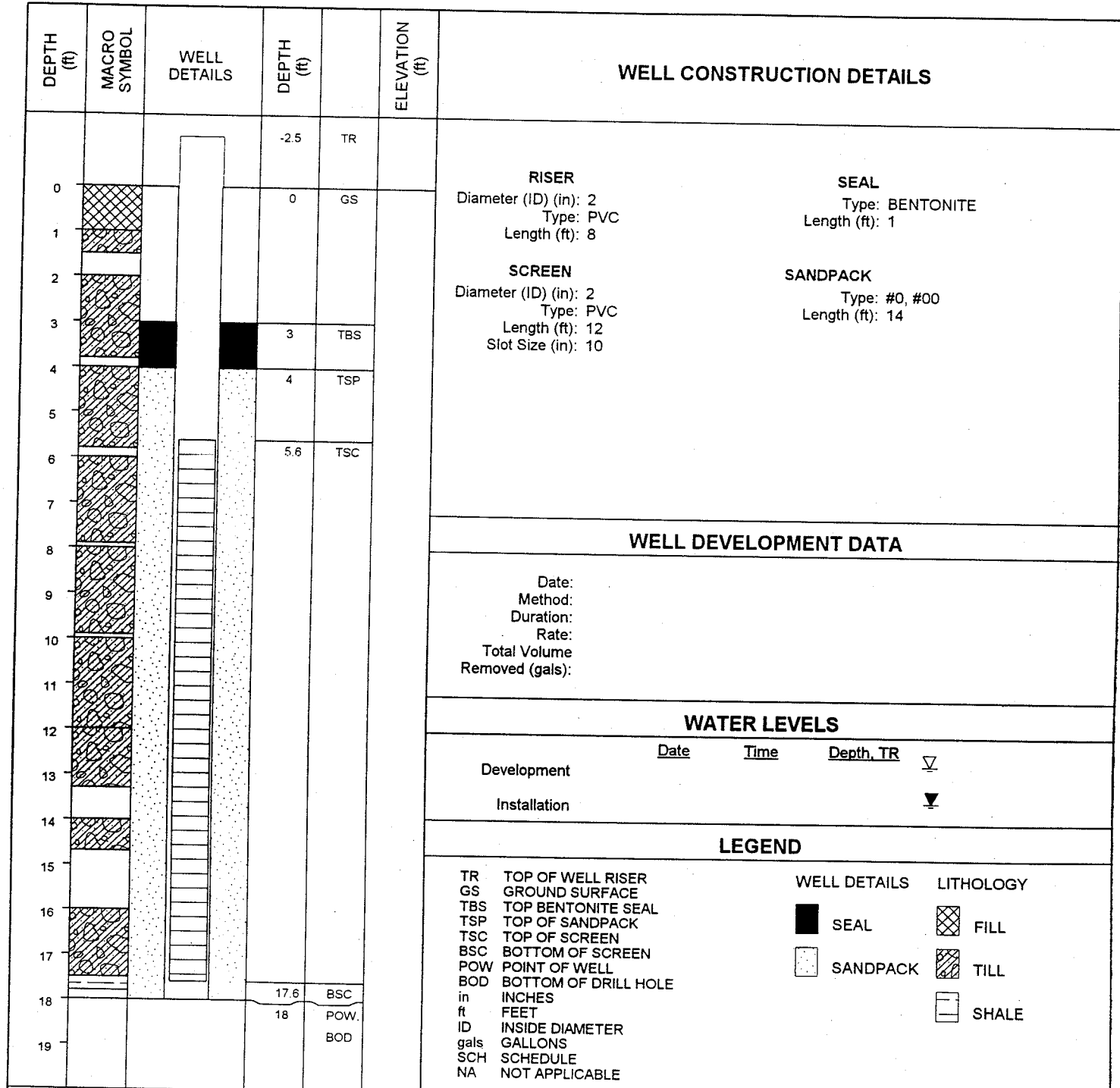
STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS												
MICRO DESCRIPTION (from boring log)	DEPTH (ft)																	
					TPC	PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 5.55 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 8.9 SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 2 SANDPACK Type: #1, #3 Interval: 11.1												
	0			0.0	GS													
ML ML ML ML-CL				1.5	TBS													
ML-CL ML-CL ML-CL				3.5	TSP													
ML-CL				4.6	TSC													
	5																	
ML ML ML																		
ML																		
ML ML SP ML ML																		
	10			13.5	BSC	WELL DEVELOPMENT DATA Date: 6/26/94 Method: BAIL Duration: 235 MIN Rate: .1030 L/MIN Final Measurements:												
				14.6	POW	WATER LEVELS <table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>6/26</td> <td>1010</td> <td>7.34</td> </tr> <tr> <td>6/26</td> <td>1310</td> <td>7.66</td> </tr> <tr> <td>6/26</td> <td>1445</td> <td>7.46</td> </tr> </tbody> </table>	Date	Time	Depth, TR	6/26	1010	7.34	6/26	1310	7.66	6/26	1445	7.46
Date	Time	Depth, TR																
6/26	1010	7.34																
6/26	1310	7.66																
6/26	1445	7.46																
	14.8					<table border="1"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td>7.19</td> <td>12</td> <td>850</td> <td>15.8</td> </tr> </tbody> </table>	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.19	12	850	15.8				
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)															
7.19	12	850	15.8															

	SURFACE SEAL		GRAVEL	TPC	TOP OF PROTECTIVE CASING
	GROUT		SAND	TR	TOP OF WELL RISER
	SEAL		SILT	GS	GROUND SURFACE
	SANDPACK		CLAY	TG	TOP OF GROUT
			NO RECOVERY	TBS	TOP OF BENTONITE SEAL
				TSP	TOP OF SANDPACK
				TSC	TOP OF SCREEN
				BSC	BOTTOM OF SCREEN
				TD	TOTAL DEPTH
				POW	POINT OF WELL

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:



NOTES:

**UNITED STATES ARMY
CORPS OF ENGINEERS
Seneca Army Depot
Romulus, New York**

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

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

1	Parsons ES Inc.	CLIENT: <u>Seneca Army Depot</u>	WELL #: <u>mw12-4</u>
PROJECT:	<u>Sead-12 RI/FS</u>	PROJECT NO:	<u>730047-01001</u>
LOCATION:	<u>Background, North end</u>	INSPECTOR:	<u>EAF</u>
		CHECKED BY:	_____

DRILLING CONTRACTOR: <u>Maxim Tech</u>	POW DEPTH: <u>12.4 (BGS)</u>
DRILLER: <u>John Warner</u>	INSTALLATION STARTED: <u>11/5/97</u>
DRILLING COMPLETED: <u>11/4/97</u>	INSTALLATION COMPLETED: <u>11/5/97</u>
BORING DEPTH: <u>12.4 (BGS)</u>	SURFACE COMPLETION DATE: <u>11/7/99</u>
DRILLING METHOD(S): <u>474 HSA</u>	COMPLETION CONTRACTOR/CREW: <u>Maxim Tech</u>
BORING DIAMETER(S): <u>8"</u>	BEDROCK CONFIRMED (Y/N?): <u>Y</u>
ASSOCIATED SWMU/AOC: <u>Sead-12</u>	ESTIMATED GROUND ELEVATION: _____

PROTECTIVE SURFACE CASING:

DIAMETER: 4" LENGTH: 5'

RISER:

TR: -2.5 TYPE: Sch 40 pu DIAMETER: 2" LENGTH: 4.8' ¹⁶²⁶ 7.27

SCREEN:

TSC: 4.77 TYPE: Sch 40 PVC DIAMETER: 2" LENGTH: 7.21' SLOT SIZE: 0.010"

POINT OF WELL: (SILT SUMP)

TYPE: Sump BSC: 11.98 POW: 12.2

GROUT:

None TG: _____ TYPE: _____ LENGTH: _____

SEAL:

TBS: 2.4' TYPE: Bentonite chip LENGTH: 1'

SAND PACK:

TSP: 3.4' / 3.9' TYPE: none # 20 / none # 0 LENGTH: 0.5' / 8.3'

SURFACE COLLAR:

TYPE: Concrete RADIUS: 2' THICKNESS CENTER: 1' THICKNESS EDGE: 4"

CENTRALIZER DEPTHS

None

DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

TEMPORARY WELL COMPLETION REPORT: MW12-7

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:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
0			-2.55	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.55</p> <p>SEAL Type: BENTONITE Length (ft): 2</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 6 Slot Size (in): 10</p> <p>SANDPACK Type: #0, #00 Length (ft): 9.8</p>															
0			0	GS																
2			2	TBS																
4			4	TSP																
6			6	TSC																
12			12	BSC																
13.6			13.6	POW	<p style="text-align: center;">WELL DEVELOPMENT DATA</p> <p>Date: Method: Duration: Rate: Total Volume Removed (gals):</p>															
13.8			13.8	BOD																
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;"><u>Date</u></th> <th style="width: 15%;"><u>Time</u></th> <th style="width: 15%;"><u>Depth, TR</u></th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td>Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td>Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>		Development				▽	Installation				▼
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>																	
Development				▽																
Installation				▼																
LEGEND																				
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE		WELL DETAILS SEAL SANDPACK		LITHOLOGY FILL TILL SHALE																

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-7**

TEMPORARY WELL COMPLETION REPORT: MW12-8

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"
SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 12
DEPTH TO WATER:
BORING LOCATION:
COORDINATE SYSTEM: NAD83
GROUND SURFACE ELEVATION:
ELEVATION DATUM: NAVD1927
INSPECTOR: TGH
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
0			-2.6	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.6</p> <p>SEAL Type: BENTONITE Length (ft): 1.5</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 6.85 Slot Size (in): 10</p> <p>SANDPACK Type: #0, #00 Length (ft): 9</p>															
0			0	GS																
1																				
2			2	TBS																
3																				
3.5			3.5	TSP																
4.6			4.6	TSC																
5																				
6																				
7																				
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 15%;"><u>Date</u></th> <th style="width: 15%;"><u>Time</u></th> <th style="width: 15%;"><u>Depth, TR</u></th> <th style="width: 25%;"></th> </tr> </thead> <tbody> <tr> <td>Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td>Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>		Development				▽	Installation				▼
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>																	
Development				▽																
Installation				▼																
LEGEND																				
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE		WELL DETAILS SEAL SANDPACK		LITHOLOGY FILL TILL SHALE																

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-8**

TEMPORARY WELL COMPLETION REPORT: MW12-9

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:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
			-2.5	TR																
0	[Cross-hatch]		0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.3 SEAL Type: BENTONITE Length (ft): 2															
1	[Cross-hatch]																			
2	[Diagonal lines]		2.2	TBS	SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 7.1 Slot Size (in): 10 SANDPACK Type: #0, #00 Length (ft): 9.9															
3	[Diagonal lines]																			
4	[Diagonal lines]		4.2	TSP																
5	[Diagonal lines]																			
6	[Diagonal lines]		6.2	TSC																
7	[Diagonal lines]																			
8	[Diagonal lines]																			
9	[Diagonal lines]																			
10	[Diagonal lines]																			
11	[Diagonal lines]																			
12	[Diagonal lines]																			
13	[Diagonal lines]		13.3	BSC																
14	[Diagonal lines]		14.1	POW, BOD																
15	[Diagonal lines]																			
16	[Diagonal lines]																			
17	[Diagonal lines]																			
18	[Diagonal lines]																			
19	[Diagonal lines]																			
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;"><u>Date</u></th> <th style="width: 15%; text-align: center;"><u>Time</u></th> <th style="width: 15%; text-align: center;"><u>Depth, TR</u></th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td style="text-align: center;">▽</td> <td></td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td style="text-align: center;">▼</td> <td></td> </tr> </tbody> </table>							<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>		Development			▽		Installation			▼	
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>																	
Development			▽																	
Installation			▼																	
LEGEND																				
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE		WELL DETAILS [Solid black] SEAL [Dotted] SANDPACK		LITHOLOGY [Cross-hatch] FILL [Diagonal lines] TILL [Horizontal lines] SHALE																

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-9**

TEMPORARY WELL COMPLETION REPORT: MW12-10

PROJECT: 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"
SAMPLING METHOD: Split Spoon

TOTAL DEPTH: 17.1
DEPTH TO WATER:
BORING LOCATION:

COORDINATE SYSTEM: NAD83
GROUND SURFACE ELEVATION:
ELEVATION DATUM: NAVD1927
INSPECTOR: ITR
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
0			-2.5	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 9</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 10 Slot Size (in): 10</p> <p>SEAL Type: BENTONITE Length (ft): 2</p> <p>SANDPACK Type: #0, #00 Length (ft): 12.5</p>															
0			0	GS																
2.5			2.5	TBS																
4.5			4.5	TSP																
6.5			6.5	TSC																
16.5			16.5	BSC																
17			17	POW, BOD																
18																				
19																				
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;">Date</th> <th style="width: 15%; text-align: center;">Time</th> <th style="width: 15%; text-align: center;">Depth, TR</th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							Date	Time	Depth, TR		Development				▽	Installation				▼
	Date	Time	Depth, TR																	
Development				▽																
Installation				▼																
LEGEND																				
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE		WELL DETAILS SEAL SANDPACK		LITHOLOGY FILL TILL SHALE																

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-10**

TEMPORARY WELL COMPLETION REPORT: MW12-11

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:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
			-2.5	TR	
0			0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 7.9
1					SEAL Type: BENTONITE Length (ft): 2
2					SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 5.5 Slot Size (in): 10
3					SANDPACK Type: #0, #00 Length (ft): 7
4			3.6	TBS	
5					
6			5.6	TSP	
7					
8			7.6	TSC	
9					
10					
11					
12					
13			13.1	BSC, POW, BOD	
14					
15					
16					
17					
18					
19					

WELL CONSTRUCTION DETAILS

RISER
 Diameter (ID) (in): 2
 Type: PVC
 Length (ft): 7.9

SEAL
 Type: BENTONITE
 Length (ft): 2

SCREEN
 Diameter (ID) (in): 2
 Type: PVC
 Length (ft): 5.5
 Slot Size (in): 10

SANDPACK
 Type: #0, #00
 Length (ft): 7

WELL DEVELOPMENT DATA

Date:
 Method:
 Duration:
 Rate:
 Total Volume
 Removed (gals):

WATER LEVELS

	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>	
Development				▽
Installation				▼

LEGEND

TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	WELL DETAILS ■ SEAL □ SANDPACK	LITHOLOGY ▨ FILL ▩ TILL □ SHALE
---	---	---

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-11**

TEMPORARY WELL COMPLETION REPORT: MW12-12

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
INSPECTOR: ITR
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
			-2.5	TR	
0			0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft):
1					SEAL Type: BENTONITE Length (ft): 2
2					SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 7 Slot Size (in): 10
3			2.5	TBS	SANDPACK Type: #0, #00 Length (ft): 8.5
4					
5			4.5	TSP	
6			5.5	TSC	
7					
8					
9					
10					
11					
12					
13			12.5	BSC	
14			13	POW, BOD	
15					
16					
17					
18					
19					

WELL DEVELOPMENT DATA			
Date:	Method:	Duration:	Rate:
Total Volume Removed (gals):			

WATER LEVELS			
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u> ▽
Development			▽
Installation			▽

LEGEND		
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	WELL DETAILS SEAL SANDPACK	LITHOLOGY FILL TILL SHALE

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-12**

TEMPORARY WELL COMPLETION REPORT: MW12-13

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: 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:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
0			-2.8	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 10.3</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 7.5 Slot Size (in): 10</p> <p>SEAL Type: BENTONITE Length (ft): 2</p> <p>SANDPACK Type: #0, #00 Length (ft): 9</p>															
0			0	GS																
2			2	TBS																
4			4	TSP																
5.5			5.5	TSC																
13			13	POW, BOD																
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 10%; text-align: center;"><u>Date</u></th> <th style="width: 10%; text-align: center;"><u>Time</u></th> <th style="width: 10%; text-align: center;"><u>Depth, TR</u></th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td>Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td>Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>		Development				▽	Installation				▼
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>																	
Development				▽																
Installation				▼																
LEGEND																				
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE		<table style="width: 100%;"> <thead> <tr> <th style="width: 50%;">WELL DETAILS</th> <th style="width: 50%;">LITHOLOGY</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">■ SEAL</td> <td style="text-align: center;">▨ FILL</td> </tr> <tr> <td style="text-align: center;">□ SANDPACK</td> <td style="text-align: center;">▩ TILL</td> </tr> <tr> <td></td> <td style="text-align: center;">▭ SHALE</td> </tr> </tbody> </table>				WELL DETAILS	LITHOLOGY	■ SEAL	▨ FILL	□ SANDPACK	▩ TILL		▭ SHALE							
WELL DETAILS	LITHOLOGY																			
■ SEAL	▨ FILL																			
□ SANDPACK	▩ TILL																			
	▭ SHALE																			

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-13**

TEMPORARY WELL COMPLETION REPORT: MW12-14

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"
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:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																																						
			-2.5	TR																																																							
0	[Cross-hatch]		0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.6 SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 6.8 Slot Size (in): 10 SEAL Type: BENTONITE Length (ft): 2.1 SANDPACK Type: #0, #00 Length (ft): 9.9																																																						
1	[Cross-hatch]																																																										
2	[Cross-hatch]		2	TBS																																																							
3	[Cross-hatch]																																																										
4	[Diagonal lines]		4.1	TSP																																																							
5	[Diagonal lines]																																																										
6	[Diagonal lines]		6.1	TSC																																																							
7	[Diagonal lines]																																																										
8	[Diagonal lines]																																																										
9	[Diagonal lines]																																																										
10	[Diagonal lines]																																																										
11	[Diagonal lines]																																																										
12	[Diagonal lines]																																																										
13	[Diagonal lines]		12.9	BSC																																																							
14	[Diagonal lines]		14	POW, BOD																																																							
15	[Diagonal lines]																																																										
16	[Diagonal lines]																																																										
17	[Diagonal lines]																																																										
18	[Diagonal lines]																																																										
19	[Diagonal lines]																																																										
WELL DEVELOPMENT DATA																																																											
Date: Method: Duration: Rate: Total Volume Removed (gals):																																																											
WATER LEVELS																																																											
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 15%; text-align: center;"><u>Date</u></th> <th style="width: 15%; text-align: center;"><u>Time</u></th> <th style="width: 15%; text-align: center;"><u>Depth, TR</u></th> <th style="width: 25%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> </tbody> </table>							<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>		Development				▽	Installation				▽																																							
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>																																																								
Development				▽																																																							
Installation				▽																																																							
LEGEND																																																											
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 30%; text-align: center;">WELL DETAILS</th> <th style="width: 40%; text-align: center;">LITHOLOGY</th> </tr> </thead> <tbody> <tr> <td>TR</td> <td>TOP OF WELL RISER</td> <td>[Cross-hatch] FILL</td> </tr> <tr> <td>GS</td> <td>GROUND SURFACE</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>TBS</td> <td>TOP BENTONITE SEAL</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>TSP</td> <td>TOP OF SANDPACK</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>TSC</td> <td>TOP OF SCREEN</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>BSC</td> <td>BOTTOM OF SCREEN</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>POW</td> <td>POINT OF WELL</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>BOD</td> <td>BOTTOM OF DRILL HOLE</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>in</td> <td>INCHES</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>ft</td> <td>FEET</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>ID</td> <td>INSIDE DIAMETER</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>gals</td> <td>GALLONS</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>SCH</td> <td>SCHEDULE</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td>NA</td> <td>NOT APPLICABLE</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td></td> <td>[Solid black] SEAL</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td></td> <td>[Dotted] SANDPACK</td> <td>[Diagonal lines] TILL</td> </tr> <tr> <td></td> <td>[Horizontal lines] SHALE</td> <td>[Diagonal lines] TILL</td> </tr> </tbody> </table>							WELL DETAILS	LITHOLOGY	TR	TOP OF WELL RISER	[Cross-hatch] FILL	GS	GROUND SURFACE	[Diagonal lines] TILL	TBS	TOP BENTONITE SEAL	[Diagonal lines] TILL	TSP	TOP OF SANDPACK	[Diagonal lines] TILL	TSC	TOP OF SCREEN	[Diagonal lines] TILL	BSC	BOTTOM OF SCREEN	[Diagonal lines] TILL	POW	POINT OF WELL	[Diagonal lines] TILL	BOD	BOTTOM OF DRILL HOLE	[Diagonal lines] TILL	in	INCHES	[Diagonal lines] TILL	ft	FEET	[Diagonal lines] TILL	ID	INSIDE DIAMETER	[Diagonal lines] TILL	gals	GALLONS	[Diagonal lines] TILL	SCH	SCHEDULE	[Diagonal lines] TILL	NA	NOT APPLICABLE	[Diagonal lines] TILL		[Solid black] SEAL	[Diagonal lines] TILL		[Dotted] SANDPACK	[Diagonal lines] TILL		[Horizontal lines] SHALE	[Diagonal lines] TILL
	WELL DETAILS	LITHOLOGY																																																									
TR	TOP OF WELL RISER	[Cross-hatch] FILL																																																									
GS	GROUND SURFACE	[Diagonal lines] TILL																																																									
TBS	TOP BENTONITE SEAL	[Diagonal lines] TILL																																																									
TSP	TOP OF SANDPACK	[Diagonal lines] TILL																																																									
TSC	TOP OF SCREEN	[Diagonal lines] TILL																																																									
BSC	BOTTOM OF SCREEN	[Diagonal lines] TILL																																																									
POW	POINT OF WELL	[Diagonal lines] TILL																																																									
BOD	BOTTOM OF DRILL HOLE	[Diagonal lines] TILL																																																									
in	INCHES	[Diagonal lines] TILL																																																									
ft	FEET	[Diagonal lines] TILL																																																									
ID	INSIDE DIAMETER	[Diagonal lines] TILL																																																									
gals	GALLONS	[Diagonal lines] TILL																																																									
SCH	SCHEDULE	[Diagonal lines] TILL																																																									
NA	NOT APPLICABLE	[Diagonal lines] TILL																																																									
	[Solid black] SEAL	[Diagonal lines] TILL																																																									
	[Dotted] SANDPACK	[Diagonal lines] TILL																																																									
	[Horizontal lines] SHALE	[Diagonal lines] TILL																																																									

NOTES:

UNITED STATES ARMY
CORPS OF ENGINEERS
Seneca Army Depot
Romulus, New York

TEMPORARY WELL
COMPLETION REPORT: MW12-14

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

1	Parsons ES Inc.	CLIENT: <u>Seneca Army Depot</u>	WELL #: <u>MW12-15</u>
PROJECT:	<u>Seneca Sead-12 RI/FS</u>	PROJECT NO:	<u>730097-01001</u>
LOCATION:	<u>North of disposal pit X¹⁰⁰C</u>	INSPECTOR:	<u>DRG/ITR</u>
		CHECKED BY:	<u>DRG</u>

DRILLING CONTRACTOR: <u>Maxim Tech.</u> DRILLER: <u>Rodney Bush</u> DRILLING COMPLETED: <u>10/1/98</u> BORING DEPTH: <u>13.1 (BGS)</u> DRILLING METHOD(S): <u>4 1/4 HSA</u> BORING DIAMETER(S): <u>8"</u> ASSOCIATED SWMU/AOC: <u>SEAD-12</u>	POW DEPTH: <u>13.1</u> INSTALLATION STARTED: <u>10/1/98</u> INSTALLATION COMPLETED: <u>10/1/98</u> SURFACE COMPLETION DATE: <u>10/5/98</u> COMPLETION CONTRACTOR/CREW: <u>Maxim</u> BEDROCK CONFIRMED (Y/N?): <u>Y</u> ESTIMATED GROUND ELEVATION: _____
---	--

PROTECTIVE SURFACE CASING:

DIAMETER: 8" LENGTH: 5'

RISER:

TR: 2.6' TYPE: PVC sub 40 DIAMETER: 2" LENGTH: 10'

SCREEN:

TSC: 5.4 (BGS) TYPE: Sub 40 PVC DIAMETER: 2" LENGTH: 7.2' SLOT SIZE: 0.010"

POINT OF WELL: (SILT SUMP)

TYPE: Sump BSC: 12.6 (BGS) POW: 13.1 (BGS)

GROUT:

None TG: Surface (0.0 BGS) TYPE: Bentonite clay LENGTH: 3.9 2'

SEAL:

TBS: 1.9 BGS TYPE: Bentonite clay LENGTH: 2'

SAND PACK:

TSP: 3.9 4.4 CRS TYPE: marie sd LENGTH: 0.5'

SURFACE COLLAR:

TYPE: concrete/Bentonite RADIUS: 2' THICKNESS CENTER: 1' THICKNESS EDGE: 4"

CENTRALIZER DEPTHS None

DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

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:
BORING LOCATION:
COORDINATE SYSTEM: NAD83
GROUND SURFACE ELEVATION:
ELEVATION DATUM: NAVD1927
INSPECTOR: ITR
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
			-2.45	TR																
0	[Cross-hatch]		0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.85															
1	[Cross-hatch]				SEAL Type: BENTONITE Length (ft): 2															
2	[Cross-hatch]		2.4	TBS	SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 7 Slot Size (in): 10															
3	[Cross-hatch]				SANDPACK Type: #0, #00 Length (ft): 9.8															
4	[Diagonal lines]		4.4	TSP																
5	[Diagonal lines]																			
6	[Diagonal lines]		6.4	TSC																
7	[Diagonal lines]																			
8	[Diagonal lines]																			
9	[Diagonal lines]																			
10	[Diagonal lines]																			
11	[Diagonal lines]																			
12	[Diagonal lines]																			
13	[Diagonal lines]																			
14	[Diagonal lines]		13.4	BSC																
15	[Diagonal lines]		14.2	POW, BOD																
16	[Diagonal lines]																			
17	[Diagonal lines]																			
18	[Diagonal lines]																			
19	[Diagonal lines]																			
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;"><u>Date</u></th> <th style="width: 15%; text-align: center;"><u>Time</u></th> <th style="width: 15%; text-align: center;"><u>Depth, TR</u></th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td style="text-align: center;">▽</td> <td></td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td style="text-align: center;">▼</td> <td></td> </tr> </tbody> </table>							<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>		Development			▽		Installation			▼	
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>																	
Development			▽																	
Installation			▼																	
LEGEND																				
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE		WELL DETAILS [Solid black] SEAL [Dotted] SANDPACK		LITHOLOGY [Cross-hatch] FILL [Diagonal lines] TILL [Horizontal lines] SHALE																

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

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

TEMPORARY WELL COMPLETION REPORT: MW12-17

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
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
			-2.9	TR																
0	[Cross-hatch]		0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.3															
1	[Cross-hatch]				SEAL Type: BENTONITE Length (ft): 1.8															
2	[Cross-hatch]		2	TBS	SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 12.2 Slot Size (in): 10															
3	[Cross-hatch]				SANDPACK Type: #0, #00 Length (ft): 14.6															
4	[Cross-hatch]		3.8	TSP																
5	[Cross-hatch]																			
6	[Cross-hatch]		5.4	TSC																
7	[Cross-hatch]																			
8	[Cross-hatch]																			
9	[Cross-hatch]																			
10	[Cross-hatch]																			
11	[Cross-hatch]																			
12	[Cross-hatch]																			
13	[Cross-hatch]																			
14	[Cross-hatch]																			
15	[Cross-hatch]																			
16	[Cross-hatch]																			
17	[Cross-hatch]																			
18	[Cross-hatch]		17.6	BSC																
19	[Cross-hatch]		18.4	POW, BOD																
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;">Date</th> <th style="width: 15%; text-align: center;">Time</th> <th style="width: 15%; text-align: center;">Depth, TR</th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							Date	Time	Depth, TR		Development				▽	Installation				▼
	Date	Time	Depth, TR																	
Development				▽																
Installation				▼																
LEGEND																				
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE		WELL DETAILS [Solid Black] SEAL [Dotted] SANDPACK		LITHOLOGY [Cross-hatch] FILL [Diagonal Lines] TILL [Horizontal Lines] SHALE																

NOTES:

UNITED STATES ARMY
CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York

TEMPORARY WELL
COMPLETION REPORT: MW12-17

TEMPORARY WELL COMPLETION REPORT: MW12-18

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 SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
			-2.5	TR																
0			0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.5															
1	X				SEAL Type: BENTONITE Length (ft): 2															
2	X				SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 7.3 Slot Size (in): 10															
3			2.5	TBS	SANDPACK Type: #0, #00 Length (ft): 10															
4																				
5	X		4.5	TSP																
6	X		6	TSC																
7	X																			
8	X																			
9	X																			
10	X																			
11	X																			
12	X																			
13	X																			
14	X		13.3	BSC																
15			14.5	POW, BOD																
16																				
17																				
18																				
19																				
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 15%;"><u>Date</u></th> <th style="width: 15%;"><u>Time</u></th> <th style="width: 15%;"><u>Depth, TR</u></th> <th style="width: 25%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>		Development				▽	Installation				▼
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>																	
Development				▽																
Installation				▼																
LEGEND																				
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE		WELL DETAILS ■ SEAL □ SANDPACK		LITHOLOGY X FILL ▨ TILL ▩ SHALE																

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-18**

TEMPORARY WELL COMPLETION REPORT: MW12-19

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
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
0			-2.7	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.2</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.8 Slot Size (in): 10</p> <p>SEAL Type: BENTONITE Length (ft): 2</p> <p>SANDPACK Type: #0, #00 Length (ft): 7</p>
0			0	GS	
1					
2			2	TBS	
3					
4			4	TSP	
5					
6			5.5	TSC	
7					
8					
9					
10			10.3	BSC	
11			11	POW, BOD	
12					
13					
14					
15					
16					
17					
18					
19					

WELL DEVELOPMENT DATA			
Date:			
Method:			
Duration:			
Rate:			
Total Volume Removed (gals):			

WATER LEVELS			
Development	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u> ▽
Installation			▾

LEGEND			
TR	TOP OF WELL RISER	WELL DETAILS	LITHOLOGY
GS	GROUND SURFACE	█	▣
TBS	TOP BENTONITE SEAL	█	▣
TSP	TOP OF SANDPACK	▣	▣
TSC	TOP OF SCREEN	▣	▣
BSC	BOTTOM OF SCREEN	▣	▣
POW	POINT OF WELL	▣	▣
BOD	BOTTOM OF DRILL HOLE	▣	▣
in	INCHES		
ft	FEET		
ID	INSIDE DIAMETER		
gals	GALLONS		
SCH	SCHEDULE		
NA	NOT APPLICABLE		

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-19**

TEMPORARY WELL COMPLETION REPORT: MW12-20

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
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
			-2.7	TR	
0	GS		0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.5
1	FILL				SEAL Type: BENTONITE Length (ft): 2
2	TBS		2	TBS	SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 7 Slot Size (in): 10
3	TSP		4	TSP	SANDPACK Type: #0, #00 Length (ft): 10.4
4	TSC		5.8	TSC	
5	TSP				
6	TSC				
7	TSP				
8	TSC				
9	TSP				
10	TSC				
11	TSP				
12	TSC				
13	TSP				
14	TSC		13.8	BSC	
15	POW, BOD		14.4	POW, BOD	
16					
17					
18					
19					

WELL DEVELOPMENT DATA

Date:
 Method:
 Duration:
 Rate:
 Total Volume Removed (gals):

WATER LEVELS

	Date	Time	Depth, TR	
Development				▽
Installation				▽

LEGEND

TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	<table border="0"> <tr> <th style="text-align: left;">WELL DETAILS</th> <th style="text-align: left;">LITHOLOGY</th> </tr> <tr> <td style="text-align: center;">■ SEAL</td> <td style="text-align: center;">▨ FILL</td> </tr> <tr> <td style="text-align: center;">▨ SANDPACK</td> <td style="text-align: center;">▨ TILL</td> </tr> <tr> <td></td> <td style="text-align: center;">▨ SHALE</td> </tr> </table>	WELL DETAILS	LITHOLOGY	■ SEAL	▨ FILL	▨ SANDPACK	▨ TILL		▨ SHALE
WELL DETAILS	LITHOLOGY								
■ SEAL	▨ FILL								
▨ SANDPACK	▨ TILL								
	▨ SHALE								

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-20**

TEMPORARY WELL COMPLETION REPORT: MW12-21

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 SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																														
			-2.9	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.3</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.75 Slot Size (in): 10</p> <p>SEAL Type: BENTONITE Length (ft): 2</p> <p>SANDPACK Type: #0, #00 Length (ft): 7</p>																														
0			0	GS																															
1																																			
2			2	TBS																															
3																																			
4			4	TSP																															
5																																			
6			5.6	TSC																															
7																																			
8																																			
9																																			
10			10.35	BSC																															
11			11.2	POW, BOD																															
12																																			
13																																			
14																																			
15																																			
16																																			
17																																			
18																																			
19																																			
WELL DEVELOPMENT DATA																																			
Date: Method: Duration: Rate: Total Volume Removed (gals):																																			
WATER LEVELS																																			
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;"><u>Date</u></th> <th style="width: 15%; text-align: center;"><u>Time</u></th> <th style="width: 15%; text-align: center;"><u>Depth, TR</u></th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>		Development				▽	Installation				▼															
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>																																
Development				▽																															
Installation				▼																															
LEGEND																																			
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">WELL DETAILS</th> <th style="width: 30%;">LITHOLOGY</th> </tr> </thead> <tbody> <tr> <td>TR TOP OF WELL RISER</td> <td></td> </tr> <tr> <td>GS GROUND SURFACE</td> <td></td> </tr> <tr> <td>TBS TOP BENTONITE SEAL</td> <td>■ SEAL</td> </tr> <tr> <td>TSP TOP OF SANDPACK</td> <td>▨ SANDPACK</td> </tr> <tr> <td>TSC TOP OF SCREEN</td> <td>▩ FILL</td> </tr> <tr> <td>BSC BOTTOM OF SCREEN</td> <td>▨ TILL</td> </tr> <tr> <td>POW POINT OF WELL</td> <td>▩ SHALE</td> </tr> <tr> <td>BOD BOTTOM OF DRILL HOLE</td> <td></td> </tr> <tr> <td>in INCHES</td> <td></td> </tr> <tr> <td>ft FEET</td> <td></td> </tr> <tr> <td>ID INSIDE DIAMETER</td> <td></td> </tr> <tr> <td>gals GALLONS</td> <td></td> </tr> <tr> <td>SCH SCHEDULE</td> <td></td> </tr> <tr> <td>NA NOT APPLICABLE</td> <td></td> </tr> </tbody> </table>						WELL DETAILS	LITHOLOGY	TR TOP OF WELL RISER		GS GROUND SURFACE		TBS TOP BENTONITE SEAL	■ SEAL	TSP TOP OF SANDPACK	▨ SANDPACK	TSC TOP OF SCREEN	▩ FILL	BSC BOTTOM OF SCREEN	▨ TILL	POW POINT OF WELL	▩ SHALE	BOD BOTTOM OF DRILL HOLE		in INCHES		ft FEET		ID INSIDE DIAMETER		gals GALLONS		SCH SCHEDULE		NA NOT APPLICABLE	
WELL DETAILS	LITHOLOGY																																		
TR TOP OF WELL RISER																																			
GS GROUND SURFACE																																			
TBS TOP BENTONITE SEAL	■ SEAL																																		
TSP TOP OF SANDPACK	▨ SANDPACK																																		
TSC TOP OF SCREEN	▩ FILL																																		
BSC BOTTOM OF SCREEN	▨ TILL																																		
POW POINT OF WELL	▩ SHALE																																		
BOD BOTTOM OF DRILL HOLE																																			
in INCHES																																			
ft FEET																																			
ID INSIDE DIAMETER																																			
gals GALLONS																																			
SCH SCHEDULE																																			
NA NOT APPLICABLE																																			

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-21**

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: 10/4/98
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 (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																																						
0			-2.9	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 7.3</p> <p>SEAL Type: BENTONITE Length (ft): 1.5</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 6.7 Slot Size (in): 10</p> <p>SANDPACK Type: #0, #00 Length (ft): 9.4</p>																																																						
0			0	GS																																																							
1																																																											
2			1.7	TBS																																																							
3			3.2	TSP																																																							
4			4.4	TSC																																																							
5																																																											
6																																																											
7																																																											
8																																																											
9																																																											
10																																																											
11			11.1	BSC																																																							
12																																																											
13			12.6	POW, BOD																																																							
14																																																											
15																																																											
16																																																											
17																																																											
18																																																											
19																																																											
WELL DEVELOPMENT DATA																																																											
Date: Method: Duration: Rate: Total Volume Removed (gals):																																																											
WATER LEVELS																																																											
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;">Date</th> <th style="width: 15%; text-align: center;">Time</th> <th style="width: 15%; text-align: center;">Depth, TR</th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							Date	Time	Depth, TR		Development				▽	Installation				▼																																							
	Date	Time	Depth, TR																																																								
Development				▽																																																							
Installation				▼																																																							
LEGEND																																																											
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 30%; text-align: center;">WELL DETAILS</th> <th style="width: 40%; text-align: center;">LITHOLOGY</th> </tr> </thead> <tbody> <tr> <td>TR</td> <td>TOP OF WELL RISER</td> <td></td> </tr> <tr> <td>GS</td> <td>GROUND SURFACE</td> <td></td> </tr> <tr> <td>TBS</td> <td>TOP BENTONITE SEAL</td> <td></td> </tr> <tr> <td>TSP</td> <td>TOP OF SANDPACK</td> <td></td> </tr> <tr> <td>TSC</td> <td>TOP OF SCREEN</td> <td></td> </tr> <tr> <td>BSC</td> <td>BOTTOM OF SCREEN</td> <td></td> </tr> <tr> <td>POW</td> <td>POINT OF WELL</td> <td></td> </tr> <tr> <td>BOD</td> <td>BOTTOM OF DRILL HOLE</td> <td></td> </tr> <tr> <td>in</td> <td>INCHES</td> <td></td> </tr> <tr> <td>ft</td> <td>FEET</td> <td></td> </tr> <tr> <td>ID</td> <td>INSIDE DIAMETER</td> <td></td> </tr> <tr> <td>gals</td> <td>GALLONS</td> <td></td> </tr> <tr> <td>SCH</td> <td>SCHEDULE</td> <td></td> </tr> <tr> <td>NA</td> <td>NOT APPLICABLE</td> <td></td> </tr> <tr> <td></td> <td> SEAL</td> <td> FILL</td> </tr> <tr> <td></td> <td> SANDPACK</td> <td> TILL</td> </tr> <tr> <td></td> <td></td> <td> SHALE</td> </tr> </tbody> </table>							WELL DETAILS	LITHOLOGY	TR	TOP OF WELL RISER		GS	GROUND SURFACE		TBS	TOP BENTONITE SEAL		TSP	TOP OF SANDPACK		TSC	TOP OF SCREEN		BSC	BOTTOM OF SCREEN		POW	POINT OF WELL		BOD	BOTTOM OF DRILL HOLE		in	INCHES		ft	FEET		ID	INSIDE DIAMETER		gals	GALLONS		SCH	SCHEDULE		NA	NOT APPLICABLE			SEAL	FILL		SANDPACK	TILL			SHALE
	WELL DETAILS	LITHOLOGY																																																									
TR	TOP OF WELL RISER																																																										
GS	GROUND SURFACE																																																										
TBS	TOP BENTONITE SEAL																																																										
TSP	TOP OF SANDPACK																																																										
TSC	TOP OF SCREEN																																																										
BSC	BOTTOM OF SCREEN																																																										
POW	POINT OF WELL																																																										
BOD	BOTTOM OF DRILL HOLE																																																										
in	INCHES																																																										
ft	FEET																																																										
ID	INSIDE DIAMETER																																																										
gals	GALLONS																																																										
SCH	SCHEDULE																																																										
NA	NOT APPLICABLE																																																										
	SEAL	FILL																																																									
	SANDPACK	TILL																																																									
		SHALE																																																									

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-22**

TEMPORARY WELL COMPLETION REPORT: MW12-23

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:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																													
0			-2.4	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 7.1</p> <p>SEAL Type: BENTONITE Length (ft): 1.5</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 7.2 Slot Size (in): 10</p> <p>SANDPACK Type: #0, #00 Length (ft): 8.6</p>																																													
1			0	GS																																														
2			2	TBS																																														
3			3.5	TSP																																														
4			4.7	TSC																																														
5					WELL DEVELOPMENT DATA																																													
6					Date: Method: Duration: Rate: Total Volume Removed (gals):																																													
7					WATER LEVELS																																													
8					<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;"><u>Date</u></th> <th style="width: 15%; text-align: center;"><u>Time</u></th> <th style="width: 15%; text-align: center;"><u>Depth, TR</u></th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td>Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td>Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> </tbody> </table>		<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>		Development				▽	Installation				▽																														
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>																																															
Development				▽																																														
Installation				▽																																														
9					LEGEND																																													
10					<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 25%; text-align: center;">WELL DETAILS</th> <th style="width: 25%; text-align: center;">LITHOLOGY</th> </tr> </thead> <tbody> <tr> <td>TR TOP OF WELL RISER</td> <td style="text-align: center;">■ SEAL</td> <td style="text-align: center;">▨ FILL</td> </tr> <tr> <td>GS GROUND SURFACE</td> <td></td> <td style="text-align: center;">▨ TILL</td> </tr> <tr> <td>TBS TOP BENTONITE SEAL</td> <td></td> <td style="text-align: center;">▭ SHALE</td> </tr> <tr> <td>TSP TOP OF SANDPACK</td> <td style="text-align: center;">▨ SANDPACK</td> <td></td> </tr> <tr> <td>TSC TOP OF SCREEN</td> <td></td> <td></td> </tr> <tr> <td>BSC BOTTOM OF SCREEN</td> <td></td> <td></td> </tr> <tr> <td>POW POINT OF WELL</td> <td></td> <td></td> </tr> <tr> <td>BOD BOTTOM OF DRILL HOLE</td> <td></td> <td></td> </tr> <tr> <td>in INCHES</td> <td></td> <td></td> </tr> <tr> <td>ft FEET</td> <td></td> <td></td> </tr> <tr> <td>ID INSIDE DIAMETER</td> <td></td> <td></td> </tr> <tr> <td>gals GALLONS</td> <td></td> <td></td> </tr> <tr> <td>SCH SCHEDULE</td> <td></td> <td></td> </tr> <tr> <td>NA NOT APPLICABLE</td> <td></td> <td></td> </tr> </tbody> </table>		WELL DETAILS	LITHOLOGY	TR TOP OF WELL RISER	■ SEAL	▨ FILL	GS GROUND SURFACE		▨ TILL	TBS TOP BENTONITE SEAL		▭ SHALE	TSP TOP OF SANDPACK	▨ SANDPACK		TSC TOP OF SCREEN			BSC BOTTOM OF SCREEN			POW POINT OF WELL			BOD BOTTOM OF DRILL HOLE			in INCHES			ft FEET			ID INSIDE DIAMETER			gals GALLONS			SCH SCHEDULE			NA NOT APPLICABLE		
	WELL DETAILS	LITHOLOGY																																																
TR TOP OF WELL RISER	■ SEAL	▨ FILL																																																
GS GROUND SURFACE		▨ TILL																																																
TBS TOP BENTONITE SEAL		▭ SHALE																																																
TSP TOP OF SANDPACK	▨ SANDPACK																																																	
TSC TOP OF SCREEN																																																		
BSC BOTTOM OF SCREEN																																																		
POW POINT OF WELL																																																		
BOD BOTTOM OF DRILL HOLE																																																		
in INCHES																																																		
ft FEET																																																		
ID INSIDE DIAMETER																																																		
gals GALLONS																																																		
SCH SCHEDULE																																																		
NA NOT APPLICABLE																																																		
11			11.9	BSC																																														
12			13.3	POW, BOD																																														
13																																																		
14																																																		
15																																																		
16																																																		
17																																																		
18																																																		
19																																																		

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-23**

TEMPORARY WELL COMPLETION REPORT: MW12-24

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:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
			-2.5	TR	
0	GS		0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 7.2
1			1.5	TBS	SEAL Type: BENTONITE Length (ft): 1.5
2			3.1	TSP	SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.9 Slot Size (in): 10
3			4.7	TSC	SANDPACK Type: #0, #00 Length (ft): 6.9
4					
5					
6					
7					
8					
9					
9.6	BSC		10	POW, BOD	
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					

WELL DEVELOPMENT DATA			
Date:	Method:	Duration:	Rate:
Total Volume Removed (gals):			

WATER LEVELS			
Development	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u> ▽
Installation			▾

LEGEND			
TR	TOP OF WELL RISER	WELL DETAILS	LITHOLOGY
GS	GROUND SURFACE	SEAL	FILL
TBS	TOP BENTONITE SEAL	SANDPACK	TILL
TSP	TOP OF SANDPACK		SHALE
TSC	TOP OF SCREEN		
BSC	BOTTOM OF SCREEN		
POW	POINT OF WELL		
BOD	BOTTOM OF DRILL HOLE		
in	INCHES		
ft	FEET		
ID	INSIDE DIAMETER		
gals	GALLONS		
SCH	SCHEDULE		
NA	NOT APPLICABLE		

NOTES:

UNITED STATES ARMY
CORPS OF ENGINEERS
Seneca Army Depot
Romulus, New York

TEMPORARY WELL
COMPLETION REPORT: MW12-24

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
INSPECTOR: ITR
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
0			-2.9	TR	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 7.85</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.9 Slot Size (in): 10</p> </div> <div style="width: 45%;"> <p>SEAL Type: BENTONITE Length (ft): 1.95</p> <p>SANDPACK Type: #0, #00 Length (ft): 7.4</p> </div> </div>															
0			0	GS																
2			2	TBS																
3.95			3.95	TSP																
4.95			4.95	TSC																
9.85			9.85	BSC																
10.3			10.3	POW, BOD																
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 10%; text-align: center;"><u>Date</u></th> <th style="width: 10%; text-align: center;"><u>Time</u></th> <th style="width: 10%; text-align: center;"><u>Depth, TR</u></th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>		Development				▽	Installation				▼
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>																	
Development				▽																
Installation				▼																
LEGEND																				
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE		WELL DETAILS ■ SEAL □ SANDPACK		LITHOLOGY ▨ FILL ▩ TILL □ SHALE																

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

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

TEMPORARY WELL COMPLETION REPORT: MW12-26

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: 10.1
DEPTH TO WATER:
BORING LOCATION:

COORDINATE SYSTEM: NAD83
GROUND SURFACE ELEVATION:
ELEVATION DATUM: NAVD1927
INSPECTOR: ITR
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
			-2.6	TR	
0	[Cross-hatch]		0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 7.35
1	[Cross-hatch]				SEAL Type: BENTONITE Length (ft): 1.5
2	[Cross-hatch]		2.25	TBS	SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.85 Slot Size (in): 10
3	[Cross-hatch]				SANDPACK Type: #0, #00 Length (ft): 6.4
4	[Cross-hatch]		3.75	TSP	
5	[Cross-hatch]		4.75	TSC	
6	[Cross-hatch]				
7	[Cross-hatch]				
8	[Cross-hatch]				
9					
10			9.6	BSC	
11			10.1	POW, BOD	
12					
13					
14					
15					
16					
17					
18					
19					

WELL DEVELOPMENT DATA

Date:
 Method:
 Duration:
 Rate:
 Total Volume Removed (gals):

WATER LEVELS

	Date	Time	Depth, TR	
Development				▽
Installation				▼

LEGEND

TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">WELL DETAILS</td> <td style="width: 50%;">LITHOLOGY</td> </tr> <tr> <td>[Solid Black] SEAL</td> <td>[Cross-hatch] FILL</td> </tr> <tr> <td>[Dotted] SANDPACK</td> <td>[Diagonal Lines] TILL</td> </tr> <tr> <td></td> <td>[Horizontal Lines] SHALE</td> </tr> </table>	WELL DETAILS	LITHOLOGY	[Solid Black] SEAL	[Cross-hatch] FILL	[Dotted] SANDPACK	[Diagonal Lines] TILL		[Horizontal Lines] SHALE
WELL DETAILS	LITHOLOGY								
[Solid Black] SEAL	[Cross-hatch] FILL								
[Dotted] SANDPACK	[Diagonal Lines] TILL								
	[Horizontal Lines] SHALE								

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-26**

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
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
0			-3	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 7.5</p> <p>SEAL Type: BENTONITE Length (ft): 2</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.75 Slot Size (in): 10</p> <p>SANDPACK Type: #0, #00 Length (ft): 6.5</p>
0			0	GS	
1					
2			2	TBS	
3					
3.5				TSP	
4					
4.5				TSC	
5					
9.25				BSC	
10			10	POW, BOD	
11					
12					
13					
14					
15					
16					
17					
18					
19					

WELL DEVELOPMENT DATA			
Date:			
Method:			
Duration:			
Rate:			
Total Volume Removed (gals):			

WATER LEVELS			
Development	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u> ▽
Installation			▾

LEGEND			
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	WELL DETAILS SEAL SANDPACK	LITHOLOGY FILL TILL SHALE	

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

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

TEMPORARY WELL COMPLETION REPORT: MW12-29

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:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
0			-2.8	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.9</p> <p>SEAL Type: BENTONITE Length (ft): 1.9</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 7.1 Slot Size (in): 10</p> <p>SANDPACK Type: #0, #00 Length (ft): 10.1</p>															
0			0	GS																
2			2.1	TBS																
4			4.1	TSP																
6			6.1	TSC																
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;">Date</th> <th style="width: 15%; text-align: center;">Time</th> <th style="width: 15%; text-align: center;">Depth, TR</th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td>Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td>Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							Date	Time	Depth, TR		Development				▽	Installation				▼
	Date	Time	Depth, TR																	
Development				▽																
Installation				▼																
LEGEND																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; vertical-align: top;"> TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE </td> <td style="width: 33%; vertical-align: top;"> WELL DETAILS <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> SEAL </div> <div style="text-align: center;"> FILL </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> SANDPACK </div> <div style="text-align: center;"> TILL </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> SHALE </div> </div> </td> <td style="width: 33%;"></td> </tr> </table>						TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	WELL DETAILS <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> SEAL </div> <div style="text-align: center;"> FILL </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> SANDPACK </div> <div style="text-align: center;"> TILL </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> SHALE </div> </div>													
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	WELL DETAILS <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> SEAL </div> <div style="text-align: center;"> FILL </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> SANDPACK </div> <div style="text-align: center;"> TILL </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> SHALE </div> </div>																			

NOTES:

UNITED STATES ARMY
CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York

TEMPORARY WELL
COMPLETION REPORT: MW12-29

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: 10/16/98
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:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
			-2.7	TR																
0			0	GS	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.5</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 7.2 Slot Size (in): 10</p> <p>SEAL Type: BENTONITE Length (ft): 2</p> <p>SANDPACK Type: #0, #00 Length (ft): 10.1</p>															
1																				
2			2	TBS																
3																				
4			4	TSP																
5																				
6			5.8	TSC																
7																				
8																				
9																				
10																				
11																				
12																				
13			13	BSC																
14			14.1	POW, BOD																
15																				
16																				
17																				
18																				
19																				
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;"><u>Date</u></th> <th style="width: 15%; text-align: center;"><u>Time</u></th> <th style="width: 15%; text-align: center;"><u>Depth, TR</u></th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>		Development				▽	Installation				▼
	<u>Date</u>	<u>Time</u>	<u>Depth, TR</u>																	
Development				▽																
Installation				▼																
LEGEND																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">WELL DETAILS</th> <th style="width: 33%;">LITHOLOGY</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">■ SEAL</td> <td style="text-align: center;">▨ FILL</td> </tr> <tr> <td style="text-align: center;">▨ SANDPACK</td> <td style="text-align: center;">▨ TILL</td> </tr> <tr> <td></td> <td style="text-align: center;">▨ SHALE</td> </tr> </tbody> </table> <p> TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE </p>						WELL DETAILS	LITHOLOGY	■ SEAL	▨ FILL	▨ SANDPACK	▨ TILL		▨ SHALE							
WELL DETAILS	LITHOLOGY																			
■ SEAL	▨ FILL																			
▨ SANDPACK	▨ TILL																			
	▨ SHALE																			

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-30**

TEMPORARY WELL COMPLETION REPORT: MW12-31

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
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
			-2.7	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 7.6</p> <p>SEAL Type: BENTONITE Length (ft): 2</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.8 Slot Size (in): 10</p> <p>SANDPACK Type: #0, #00 Length (ft): 6.7</p>															
0	X		0	GS																
1	■		1.5	TBS																
2	/		3.5	TSP																
3	.		4.9	TSC																
4			9.7	BSC																
5			9.8	POW																
6			10.2	BOD																
7																				
8																				
WELL DEVELOPMENT DATA																				
<p>Date: Method: Duration: Rate: Total Volume Removed (gals):</p>																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;">Date</th> <th style="width: 15%;">Time</th> <th style="width: 15%;">Depth, TR</th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td>Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td>Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							Date	Time	Depth, TR		Development				▽	Installation				▼
	Date	Time	Depth, TR																	
Development				▽																
Installation				▼																
LEGEND																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"> <p>TR TOP OF WELL RISER</p> <p>GS GROUND SURFACE</p> <p>TBS TOP BENTONITE SEAL</p> <p>TSP TOP OF SANDPACK</p> <p>TSC TOP OF SCREEN</p> <p>BSC BOTTOM OF SCREEN</p> <p>POW POINT OF WELL</p> <p>BOD BOTTOM OF DRILL HOLE</p> <p>in INCHES</p> <p>ft FEET</p> <p>ID INSIDE DIAMETER</p> <p>gals GALLONS</p> <p>SCH SCHEDULE</p> <p>NA NOT APPLICABLE</p> </td> <td style="width: 33%;"> <p>WELL DETAILS</p> <p>■ SEAL</p> <p>□ SANDPACK</p> </td> <td style="width: 33%;"> <p>LITHOLOGY</p> <p>▨ FILL</p> <p>▧ TILL</p> <p>▭ SHALE</p> </td> </tr> </table>						<p>TR TOP OF WELL RISER</p> <p>GS GROUND SURFACE</p> <p>TBS TOP BENTONITE SEAL</p> <p>TSP TOP OF SANDPACK</p> <p>TSC TOP OF SCREEN</p> <p>BSC BOTTOM OF SCREEN</p> <p>POW POINT OF WELL</p> <p>BOD BOTTOM OF DRILL HOLE</p> <p>in INCHES</p> <p>ft FEET</p> <p>ID INSIDE DIAMETER</p> <p>gals GALLONS</p> <p>SCH SCHEDULE</p> <p>NA NOT APPLICABLE</p>	<p>WELL DETAILS</p> <p>■ SEAL</p> <p>□ SANDPACK</p>	<p>LITHOLOGY</p> <p>▨ FILL</p> <p>▧ TILL</p> <p>▭ SHALE</p>												
<p>TR TOP OF WELL RISER</p> <p>GS GROUND SURFACE</p> <p>TBS TOP BENTONITE SEAL</p> <p>TSP TOP OF SANDPACK</p> <p>TSC TOP OF SCREEN</p> <p>BSC BOTTOM OF SCREEN</p> <p>POW POINT OF WELL</p> <p>BOD BOTTOM OF DRILL HOLE</p> <p>in INCHES</p> <p>ft FEET</p> <p>ID INSIDE DIAMETER</p> <p>gals GALLONS</p> <p>SCH SCHEDULE</p> <p>NA NOT APPLICABLE</p>	<p>WELL DETAILS</p> <p>■ SEAL</p> <p>□ SANDPACK</p>	<p>LITHOLOGY</p> <p>▨ FILL</p> <p>▧ TILL</p> <p>▭ SHALE</p>																		

NOTES:

UNITED STATES ARMY
CORPS OF ENGINEERS
Seneca Army Depot
Romulus, New York

TEMPORARY WELL
COMPLETION REPORT: MW12-31

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:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
			-2.6	TR																
0	[Cross-hatch]		0	GS	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 7.75</p> <p>SEAL Type: BENTONITE Length (ft): 2</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.85 Slot Size (in): 10</p> <p>SANDPACK Type: #0, #00 Length (ft): 6.5</p>															
1	[Diagonal lines]																			
2	[Diagonal lines]		2	TBS																
3	[Diagonal lines]																			
4	[Diagonal lines]		4	TSP																
5	[Diagonal lines]		5.15	TSC																
6	[Diagonal lines]																			
7	[Diagonal lines]																			
8	[Diagonal lines]																			
9	[Diagonal lines]																			
10	[Diagonal lines]		10	BSC																
11	[Diagonal lines]		10.5	POW, BOD																
12	[Diagonal lines]																			
13	[Diagonal lines]																			
14	[Diagonal lines]																			
15	[Diagonal lines]																			
16	[Diagonal lines]																			
17	[Diagonal lines]																			
18	[Diagonal lines]																			
19	[Diagonal lines]																			
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;">Date</th> <th style="width: 15%; text-align: center;">Time</th> <th style="width: 15%; text-align: center;">Depth, TR</th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							Date	Time	Depth, TR		Development				▽	Installation				▼
	Date	Time	Depth, TR																	
Development				▽																
Installation				▼																
LEGEND																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; vertical-align: top;"> TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE </td> <td style="width: 33%; vertical-align: top;"> WELL DETAILS [Solid black] SEAL [Dotted] SANDPACK </td> <td style="width: 33%; vertical-align: top;"> LITHOLOGY [Cross-hatch] FILL [Diagonal lines] TILL [Horizontal lines] SHALE </td> </tr> </table>						TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	WELL DETAILS [Solid black] SEAL [Dotted] SANDPACK	LITHOLOGY [Cross-hatch] FILL [Diagonal lines] TILL [Horizontal lines] SHALE												
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	WELL DETAILS [Solid black] SEAL [Dotted] SANDPACK	LITHOLOGY [Cross-hatch] FILL [Diagonal lines] TILL [Horizontal lines] SHALE																		

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

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

BEDROCK MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

ENGINEERING-SCIENCE, INC.		CLIENT: <u>Seneca Army Depot</u>	WELL #: <u>MW12-35</u>	
PROJECT: <u>Sead-12 RI/FS</u>	LOCATION: <u>North of 804, immediately downgradient of Washat UST</u>		PROJECT NO: <u>730047-01001</u>	INSPECTOR: <u>DRG/JTR</u>
DRILLING CONTRACTOR: <u>Maxum Technology</u>		DRILLER: <u>Rodney Bush</u>	POW DEPTH: <u>38' (BGS)</u>	OUTER CASING INSTALLATION: <u>10/30/98</u>
DRILLING COMPLETED: <u>11/3/98</u>	DEPTH TO BEDROCK: <u>16.8'</u>	BORING DEPTH: <u>38.8'</u>	INNER CASING INSTALLATION: <u>11/3/98</u>	SURFACE COMPLETION DATE: <u>11/4/98</u>
DRILLING METHOD(S): <u>HQ core (2.5")</u>	BORING DIAMETER(S): <u>3 1/2</u>	ASSOCIATED SWMU/AOC: <u>Sead-12</u>	COMPLETION CONTRACTOR/CREW: <u>maxum</u>	CORE TYPE/SIZE: <u>HQ (2.5")</u>
			FOOTAGE CORED: <u>2'</u>	ESTIMATED GROUND ELEVATION: _____
PROTECTIVE CASING:				
DIAMETER: <u>6"</u>		LENGTH: <u>19'</u>		
OUTER CASING:				
TC: <u>-2.5'</u>	TYPE: <u>steel</u>	DIAMETER: <u>6"</u>	LENGTH: <u>19'</u>	POC: <u>16.8'</u>
RISER:				
TR: <u>-2.5'</u>	TYPE: <u>pvc sch 40</u>	DIAMETER: <u>2"</u>	LENGTH: <u>30.2'</u>	
SCREEN:				
TSC: <u>27.7' (BGS)</u>	TYPE: <u>sch 40 pvc</u>	DIAMETER: <u>2"</u>	LENGTH: <u>70' ^(POC) 9.8'</u>	SLOT SIZE: <u>0.010"</u>
POINT OF WELL: (SILT SUMP)				
TYPE: <u>Sump</u>	BSC: <u>37.5' (BGS)</u>	POW: <u>38' (BGS)</u>		
GROUT:				
OUTER	TG: <u>2'</u>	TYPE: <u>Cement / Bentonite</u>	LENGTH: <u>14.8'</u>	
INNER	TG: <u>0'</u>	TYPE: <u>Cement / Bentonite</u>	LENGTH: <u>14.8'</u>	
SEAL:				
TBS: <u>14.8'</u>	TYPE: <u>Bentonite chip</u>		LENGTH: <u>9.9'</u>	
SAND PACK:				
TSP: <u>24.7</u>	TYPE: <u>more #00</u>		LENGTH: <u>1.0'</u>	
TSP: <u>25.7</u>	TYPE: <u>more #0</u>		LENGTH: <u>13.1'</u>	
SURFACE COLLAR:				
TYPE: <u>concrete</u>	RADIUS: <u>2'</u>	THICKNESS CENTER: <u>1'</u>	THICKNESS EDGE: <u>4"</u>	
CENTRALIZER DEPTHS				
DEPTH 1: <u>38' - 37.5'</u>	DEPTH 2: <u>27.5' - 27.0'</u>	DEPTH 3: _____	DEPTH 4: _____	
COMMENTS: <u>BOD 38.8' Backfill 0.8' with well sand.</u>				

* ALL MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

TEMPORARY WELL COMPLETION REPORT: MW12-37

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:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS															
			-2.4	TR																
0	[Cross-hatch]		0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 7.4															
1					SEAL Type: BENTONITE Length (ft): 2															
2	[Cross-hatch]		2	TBS	SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.9 Slot Size (in): 10															
3					SANDPACK Type: #0, #00 Length (ft): 6.4															
4			4	TSP																
5			5	TSC																
6																				
7																				
8																				
9																				
10			9.9	BSC																
11			10.7	POW, BOD																
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
WELL DEVELOPMENT DATA																				
Date: Method: Duration: Rate: Total Volume Removed (gals):																				
WATER LEVELS																				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;">Date</th> <th style="width: 15%;">Time</th> <th style="width: 15%;">Depth, TR</th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>							Date	Time	Depth, TR		Development				▽	Installation				▼
	Date	Time	Depth, TR																	
Development				▽																
Installation				▼																
LEGEND																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; vertical-align: top;"> TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE </td> <td style="width: 30%; vertical-align: top;"> WELL DETAILS [Solid Black] SEAL [Dotted] SANDPACK </td> <td style="width: 40%; vertical-align: top;"> LITHOLOGY [Cross-hatch] FILL [Diagonal Lines] TILL [Horizontal Lines] SHALE </td> </tr> </table>						TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	WELL DETAILS [Solid Black] SEAL [Dotted] SANDPACK	LITHOLOGY [Cross-hatch] FILL [Diagonal Lines] TILL [Horizontal Lines] SHALE												
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	WELL DETAILS [Solid Black] SEAL [Dotted] SANDPACK	LITHOLOGY [Cross-hatch] FILL [Diagonal Lines] TILL [Horizontal Lines] SHALE																		

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-37**

TEMPORARY WELL COMPLETION REPORT: MW12-38

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
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
			-2	TR	
0	GS		0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 4.8
1	TBS		1.5	TBS	SEAL Type: BENTONITE Length (ft): 2.5
2	TSP		3.5	TSP	SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.9 Slot Size (in): 10
3	TSC		5	TSC	SANDPACK Type: #0, #00 Length (ft): 6.3
4					
5					
6					
7					
8					
9					
10	BSC		9.9	BSC	
11	POW, BOD		10.5	POW, BOD	
12					
13					
14					
15					
16					
17					
18					
19					

WELL DEVELOPMENT DATA			
Date:	Method:	Duration:	Rate:
Total Volume Removed (gals):			

WATER LEVELS			
Development	Date	Time	Depth, TR ▽
Installation			▼

LEGEND			
TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE	WELL DETAILS <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> SEAL </div> <div style="text-align: center;"> SANDPACK </div> </div>	LITHOLOGY <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> FILL </div> <div style="text-align: center;"> TILL </div> </div> <div style="text-align: center; margin-top: 5px;"> SHALE </div>	

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-38**

TEMPORARY WELL COMPLETION REPORT: MW12-39

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
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS										
0	[Pattern]	[Diagram]	-2	TR	<p>RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 4.8</p> <p>SEAL Type: 1.5 Length (ft): 2.5</p> <p>SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.9 Slot Size (in): 10</p> <p>SANDPACK Type: #0, #00 Length (ft): 6.3</p>										
1	[Pattern]	[Diagram]	0	GS											
2	[Pattern]	[Diagram]	1.5	TBS											
3	[Pattern]	[Diagram]	3.5	TSP											
5	[Pattern]	[Diagram]	5	TSC											
9.9	[Pattern]	[Diagram]	9.9	BSC	<p>WELL DEVELOPMENT DATA</p> <p>Date: Method: Duration: Rate: Total Volume Removed (gals):</p>										
10.5	[Pattern]	[Diagram]	10.5	POW, BOD	<p>WATER LEVELS</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Development</th> <th style="width: 15%;">Date</th> <th style="width: 15%;">Time</th> <th style="width: 15%;">Depth, TR</th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> </tbody> </table>	Development	Date	Time	Depth, TR		Installation				▽
Development	Date	Time	Depth, TR												
Installation				▽											
<p>LEGEND</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">WELL DETAILS</th> <th style="width: 30%;">LITHOLOGY</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">[Symbol] SEAL</td> <td style="text-align: center;">[Symbol] FILL</td> </tr> <tr> <td style="text-align: center;">[Symbol] SANDPACK</td> <td style="text-align: center;">[Symbol] TILL</td> </tr> <tr> <td></td> <td style="text-align: center;">[Symbol] SHALE</td> </tr> </tbody> </table> <p> TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN POW POINT OF WELL BOD BOTTOM OF DRILL HOLE in INCHES ft FEET ID INSIDE DIAMETER gals GALLONS SCH SCHEDULE NA NOT APPLICABLE </p>						WELL DETAILS	LITHOLOGY	[Symbol] SEAL	[Symbol] FILL	[Symbol] SANDPACK	[Symbol] TILL		[Symbol] SHALE		
WELL DETAILS	LITHOLOGY														
[Symbol] SEAL	[Symbol] FILL														
[Symbol] SANDPACK	[Symbol] TILL														
	[Symbol] SHALE														

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**TEMPORARY WELL
 COMPLETION REPORT: MW12-39**

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
CHECKED BY:

DEPTH (ft)	MACRO SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																													
			-2.7	TR																																														
0	GS		0	GS	RISER Diameter (ID) (in): 2 Type: PVC Length (ft): 8.4																																													
1	TBS				SEAL Type: BENTONITE Length (ft): 2																																													
2	TSP		2	TBS	SCREEN Diameter (ID) (in): 2 Type: PVC Length (ft): 4.85 Slot Size (in): 10																																													
3	TSC				SANDPACK Type: #0, #00 Length (ft): 6.9																																													
4	BSC		4	TSP																																														
5	POW		5.7	TSC																																														
6	BOD		10.55	BSC																																														
7			10.9	POW, BOD																																														
8					WELL DEVELOPMENT DATA																																													
9					Date: Method: Duration: Rate: Total Volume Removed (gals):																																													
10					WATER LEVELS																																													
11					<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 15%; text-align: center;">Date</th> <th style="width: 15%; text-align: center;">Time</th> <th style="width: 15%; text-align: center;">Depth, TR</th> <th style="width: 25%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Development</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▽</td> </tr> <tr> <td style="text-align: center;">Installation</td> <td></td> <td></td> <td></td> <td style="text-align: center;">▼</td> </tr> </tbody> </table>		Date	Time	Depth, TR		Development				▽	Installation				▼																														
	Date	Time	Depth, TR																																															
Development				▽																																														
Installation				▼																																														
12					LEGEND																																													
13					<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 30%; text-align: center;">WELL DETAILS</th> <th style="width: 40%; text-align: center;">LITHOLOGY</th> </tr> </thead> <tbody> <tr> <td>TR</td> <td>TOP OF WELL RISER</td> <td></td> </tr> <tr> <td>GS</td> <td>GROUND SURFACE</td> <td></td> </tr> <tr> <td>TBS</td> <td>TOP BENTONITE SEAL</td> <td> SEAL</td> </tr> <tr> <td>TSP</td> <td>TOP OF SANDPACK</td> <td> FILL</td> </tr> <tr> <td>TSC</td> <td>TOP OF SCREEN</td> <td></td> </tr> <tr> <td>BSC</td> <td>BOTTOM OF SCREEN</td> <td> SANDPACK</td> </tr> <tr> <td>POW</td> <td>POINT OF WELL</td> <td> TILL</td> </tr> <tr> <td>BOD</td> <td>BOTTOM OF DRILL HOLE</td> <td></td> </tr> <tr> <td>in</td> <td>INCHES</td> <td></td> </tr> <tr> <td>ft</td> <td>FEET</td> <td></td> </tr> <tr> <td>ID</td> <td>INSIDE DIAMETER</td> <td> SHALE</td> </tr> <tr> <td>gals</td> <td>GALLONS</td> <td></td> </tr> <tr> <td>SCH</td> <td>SCHEDULE</td> <td></td> </tr> <tr> <td>NA</td> <td>NOT APPLICABLE</td> <td></td> </tr> </tbody> </table>		WELL DETAILS	LITHOLOGY	TR	TOP OF WELL RISER		GS	GROUND SURFACE		TBS	TOP BENTONITE SEAL	SEAL	TSP	TOP OF SANDPACK	FILL	TSC	TOP OF SCREEN		BSC	BOTTOM OF SCREEN	SANDPACK	POW	POINT OF WELL	TILL	BOD	BOTTOM OF DRILL HOLE		in	INCHES		ft	FEET		ID	INSIDE DIAMETER	SHALE	gals	GALLONS		SCH	SCHEDULE		NA	NOT APPLICABLE	
	WELL DETAILS	LITHOLOGY																																																
TR	TOP OF WELL RISER																																																	
GS	GROUND SURFACE																																																	
TBS	TOP BENTONITE SEAL	SEAL																																																
TSP	TOP OF SANDPACK	FILL																																																
TSC	TOP OF SCREEN																																																	
BSC	BOTTOM OF SCREEN	SANDPACK																																																
POW	POINT OF WELL	TILL																																																
BOD	BOTTOM OF DRILL HOLE																																																	
in	INCHES																																																	
ft	FEET																																																	
ID	INSIDE DIAMETER	SHALE																																																
gals	GALLONS																																																	
SCH	SCHEDULE																																																	
NA	NOT APPLICABLE																																																	
14																																																		
15																																																		
16																																																		
17																																																		
18																																																		
19																																																		

NOTES:

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

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

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW13-1

PROJECT: 10 SWMU PROJECT NO: _____
 LOCATION: SEAD 13 INSPECTOR: ES
 CHECKED BY: _____

DRILLING CONTRACTOR: Empire POW DEPTH: 12'
 DRILLER: John INSTALLATION STARTED: 12-8-93
 DRILLING COMPLETED: 12-8-93 INSTALLATION COMPLETED: 12-8-93
 BORING DEPTH: 12' SURFACE COMPLETION DATE: _____
 DRILLING METHOD(S): HSA COMPLETION CONTRACTOR/CREW: Empire
 BORING DIAMETER(S): 8 1/2" BEDROCK CONFIRMED (Y/N)? _____
 ASSOCIATED SWMU/AOC: 13 ESTIMATED GROUND ELEVATION: _____

PROTECTIVE SURFACE CASING:
 DIAMETER: 4" x 4" LENGTH: _____

RISER:
 TR: _____ TYPE: PVC 40 DIAMETER: 2" LENGTH: _____

SCREEN:
 TSC: 4.3' TYPE: PVC 40 DIAMETER: 2" LENGTH: 2' + 4' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)
 TYPE: PVC point BSC: 11.1' POW: 12.0'

GROUT:
 TG: Ground TYPE: Cement-bentonite LENGTH: 2.0'

SEAL:
 TBS: 2.0' TYPE: bentonite pellets LENGTH: 1'

SAND PACK:
 TSP: 3.0' #1 35 #3 TYPE: #3 and #1 LENGTH: 9.0'

SURFACE COLLAR:
 TYPE: _____ RADIUS: 2' x 2' THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS
 DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

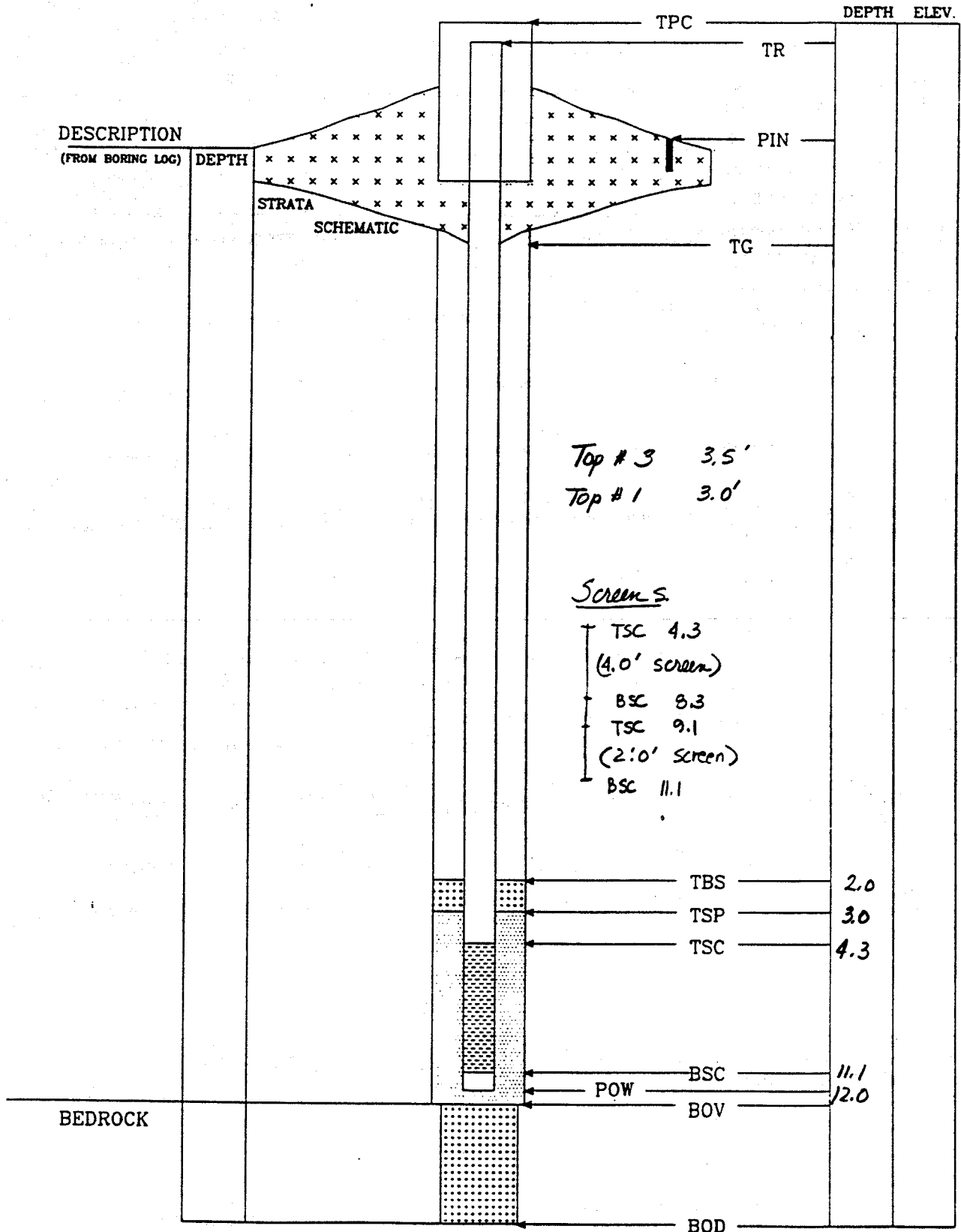
OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT:

WELL #: 13-1

DATE: 12-8-93



Note: depth measured from ground.

• NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL ROADWAY BOX - SURFACE COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW13-2

PROJECT: 10 SWMU
LOCATION: SEAD 13

PROJECT NO: _____
INSPECTOR: ES
CHECKED BY: _____

DRILLING CONTRACTOR: Empire
DRILLER: Bob
DRILLING COMPLETED: 11/9/93
BORING DEPTH: 160'
DRILLING METHOD(S): HSA
BORING DIAMETER(S): 8 1/2"
ASSOCIATED SWMU/AOC: 13

POW DEPTH: 160'
INSTALLATION STARTED: 11/9/93
INSTALLATION COMPLETED: 11/9/93
SURFACE COMPLETION DATE: _____
COMPLETION CONTRACTOR/CREW: Empire
BEDROCK CONFIRMED (Y/N?): _____
ESTIMATED GROUND ELEVATION: _____

PROTECTIVE SURFACE CASING:
DIAMETER: 4"x4" Steel LENGTH: 5' total

RISER:
TR: _____ TYPE: PVC-40 DIAMETER: 2" LENGTH: _____

SCREEN:
TSC: 6.3' TYPE: PVC-40 DIAMETER: 1 1/2" LENGTH: 9.0' SLOT SIZE: 20'

POINT OF WELL: (SILT SUMP)
TYPE: PVC Cap BSC: 15.3' POW: 16.0'

GROUT:
TG: Ground TYPE: Cement-bentonite LENGTH: 3.0'

SEAL:
TBS: 3.0' TYPE: Benton-pellets LENGTH: 1.0'

SAND PACK:
TSP: #3-5.3' #1-4.5' TYPE: #3+ #15/16" LENGTH: 10.2'

SURFACE COLLAR:
TYPE: Cement RADIUS: 2'x2' THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS
DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

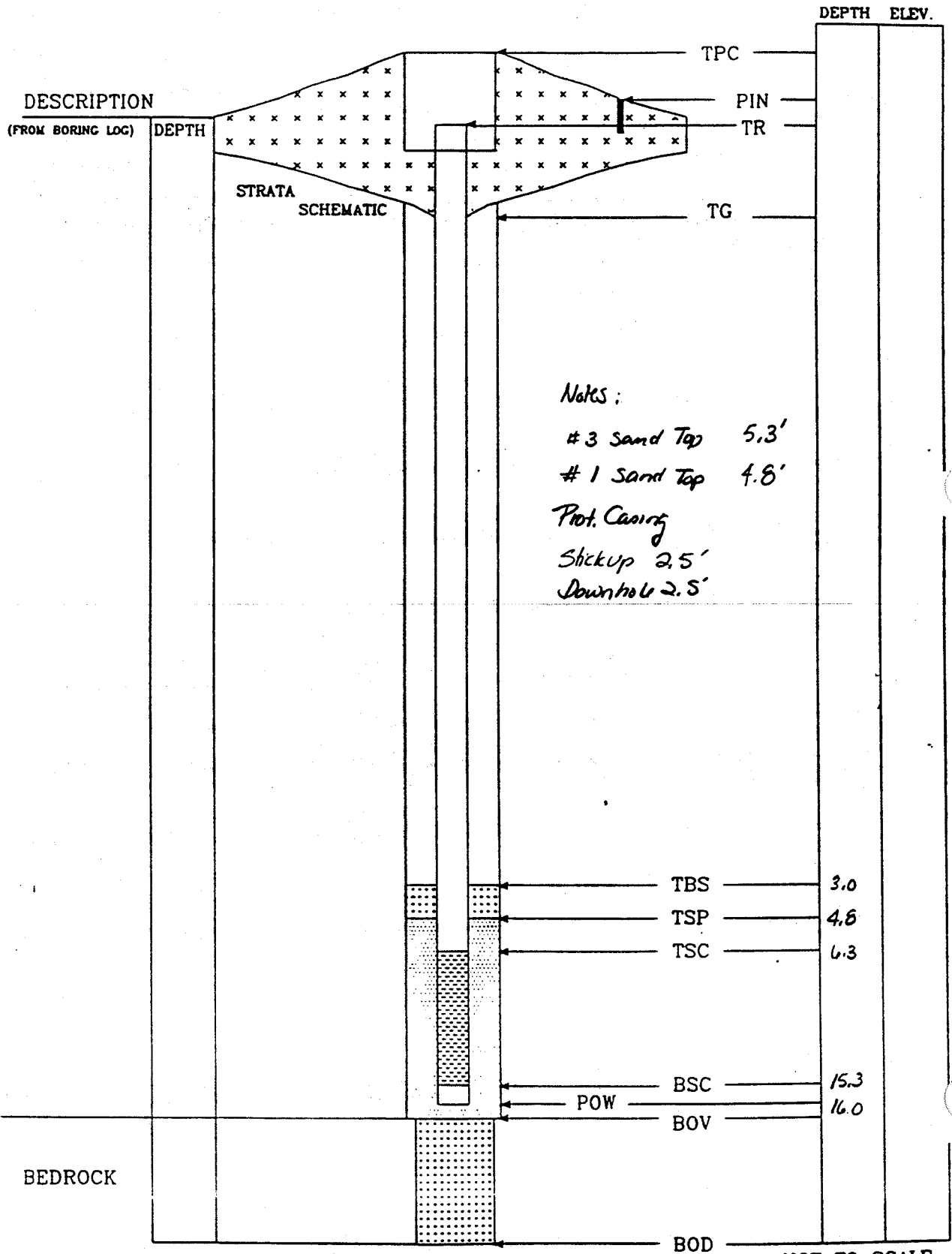
OVERBURDEN MONITORING WELL ROADWAY BOX INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT:

WELL #: MW13-2

DATE: 11/9/93



OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

ENGINEERING-SCIENCE, INC.		CLIENT: <u>ACOE</u>	WELL #: <u>MW13-3</u>
PROJECT: <u>10 Swmu</u>	PROJECT NO: _____		INSPECTOR: _____
LOCATION: <u>SEAD13</u>	CHECKED BY: _____		
DRILLING CONTRACTOR: <u>Empire</u>	POW DEPTH: <u>24.0'</u>		
DRILLER: <u>Bob</u>	INSTALLATION STARTED: <u>12-8-93</u>		
DRILLING COMPLETED: <u>12-13-93</u>	INSTALLATION COMPLETED: <u>12-13-93</u>		
BORING DEPTH: <u>24.0'</u>	SURFACE COMPLETION DATE: <u>12-13-93</u>		
DRILLING METHOD(S): <u>HSA</u>	COMPLETION CONTRACTOR/CREW: _____		
BORING DIAMETER(S): <u>8 1/2"</u>	BEDROCK CONFIRMED (Y/N)? <u>N</u>		
ASSOCIATED SWMU/AOC: <u>13</u>	ESTIMATED GROUND ELEVATION: _____		

PROTECTIVE SURFACE CASING:

DIAMETER: 4" x 4" Steel LENGTH: 5'

RISER:

TR: _____ TYPE: PVC-40 DIAMETER: 2" LENGTH: _____

SCREEN:

TSC: 8.9' TYPE: Two screens - 4' and 9' DIAMETER: 2" LENGTH: 13' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)

TYPE: PVC-point BSC: 22.9' POW: 24.0'

GROUT:

TG: Ground TYPE: Cem-bentonite LENGTH: 5.5'SEAL: TBS: 5.5' TYPE: bentonite pellets LENGTH: 2.0'SAND PACK: TSP: #3-8' #1-7.5' TYPE: #3 + #1 LENGTH: 16.5'

SURFACE COLLAR:

TYPE: _____ RADIUS: 2' x 2' THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS

DEPTH 1: _____ DEPTH 2: Ø DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT:

ACOE

WELL #: MW13-3

DATE: 12-13-93

DESCRIPTION
(FROM BORING LOG)

DEPTH

STRATA
SCHEMATIC

TPC

TR

PIN

TG

DEPTH ELEV.

Top # 3 Sampl 8.0

Top # 1 Sampl 7.5

Screen

Top Screen

9'

screen

1.0' conn.

4.0

screen

Bottom of Screen.

TBS 5.5

TSP 7.5

TSC 8.9

1.1' connecting

BSC 22.9

POW 24.0

BOV

BEDROCK

BOD

Depth measured to ground surface

* NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT: <u>ACOE</u>		WELL #: <u>MW13-4</u>	
PROJECT: <u>10 SWMU</u>		PROJECT NO: _____	
LOCATION: <u>SEAD 13</u>		INSPECTOR: <u>ES/MB/KK</u>	
		CHECKED BY: _____	
DRILLING CONTRACTOR: <u>Empire</u>		POW DEPTH: <u>8.5'</u>	
DRILLER: <u>Scott</u>		INSTALLATION STARTED: <u>12-15-93</u>	
DRILLING COMPLETED: _____		INSTALLATION COMPLETED: _____	
BORING DEPTH: <u>8.5'</u>		SURFACE COMPLETION DATE: _____	
DRILLING METHOD(S): <u>HSA</u>		COMPLETION CONTRACTOR/CREW: <u>Empire/Scott</u>	
BORING DIAMETER(S): <u>8 1/2"</u>		BEDROCK CONFIRMED (Y/N): _____	
ASSOCIATED SWMU/AOC: <u>13</u>		ESTIMATED GROUND ELEVATION: _____	
PROTECTIVE SURFACE CASING:			
DIAMETER: <u>4" x 4" Steel</u> LENGTH: _____			
RISER:			
TR: _____ TYPE: <u>PVC-40</u> DIAMETER: <u>2"</u> LENGTH: _____			
SCREEN:			
TSC: <u>2.5'</u> TYPE: <u>PVC 40</u> DIAMETER: <u>2"</u> LENGTH: <u>4.0'</u> SLOT SIZE: <u>0.01"</u>			
POINT OF WELL: (SILT SUMP)			
TYPE: <u>PVC point</u> BSC: <u>7.5'</u> POW: <u>8.5'</u>			
GROUT:			
TG: <u>Ground</u> TYPE: <u>Cement-bentonite</u> LENGTH: <u>1.5'</u>			
SEAL:			
TBS: <u>1.5'</u> TYPE: <u>bentonite pellets</u> LENGTH: <u>1.0'</u>			
SAND PACK:			
TSP: <u>#1-2.5' #3-3.0'</u> TYPE: <u>#3 and #1</u> LENGTH: <u>6.0'</u>			
SURFACE COLLAR:			
TYPE: _____ RADIUS: <u>2'x2'</u> THICKNESS CENTER: <u>1'</u> THICKNESS EDGE: <u>1'</u>			
CENTRALIZER DEPTHS			
DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____			
COMMENTS:			

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

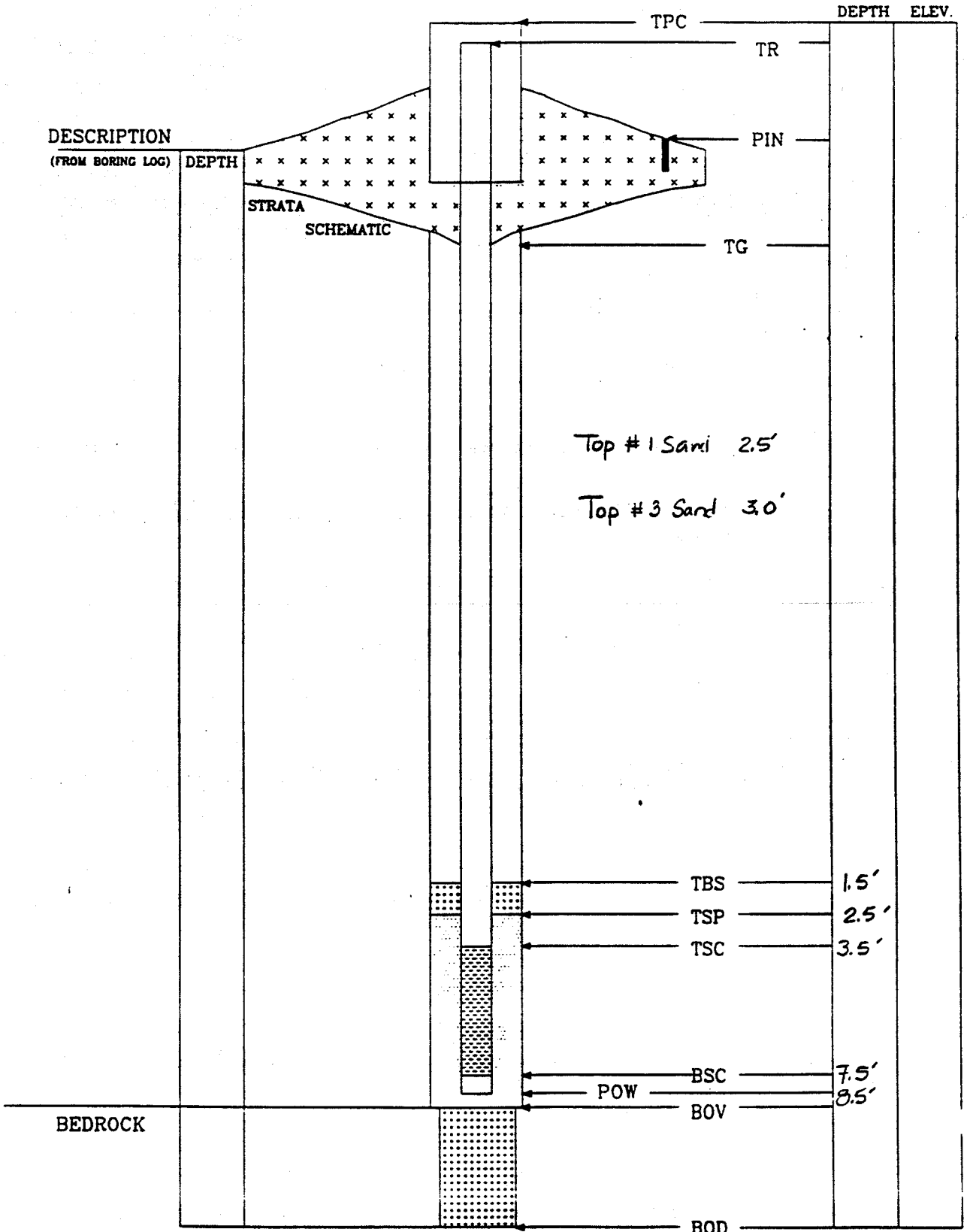
OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT: **ACOE**

WELL #: **MW13-4**

DATE: **12-15-93**



• NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

ROADWAY BOX - SURFACE COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT: <u>ACO E</u>		WELL #: <u>MW13-5</u>	
PROJECT: <u>10 SWMU</u>		PROJECT NO: _____	
LOCATION: <u>SEAD 13</u>		INSPECTOR: <u>ES/LB</u>	
		CHECKED BY: _____	
DRILLING CONTRACTOR: <u>Empire</u>		POW DEPTH: <u>16.0'</u>	
DRILLER: <u>Bob</u>		INSTALLATION STARTED: <u>11/8/93</u>	
DRILLING COMPLETED: <u>11/9/93</u>		INSTALLATION COMPLETED: <u>11/9/93</u>	
BORING DEPTH: <u>16.0'</u>		SURFACE COMPLETION DATE: _____	
DRILLING METHOD(S): <u>HSA</u>		COMPLETION CONTRACTOR/CREW: <u>Empire</u>	
BORING DIAMETER(S): <u>8 1/2"</u>		BEDROCK CONFIRMED (Y/N?): _____	
ASSOCIATED SWMU/AOC: <u>13</u>		ESTIMATED GROUND ELEVATION: _____	
PROTECTIVE SURFACE CASING:			
DIAMETER: <u>4" x 4" Steel</u> LENGTH: <u>5.0' total</u>			
RISER:			
TR: _____ TYPE: <u>PVC-40</u> DIAMETER: <u>2"</u> LENGTH: _____			
SCREEN:			
TSC: <u>16.3'</u> TYPE: <u>PVC-40</u> DIAMETER: <u>11.2"</u> LENGTH: <u>90'</u> SLOT SIZE: <u>0.01"</u>			
POINT OF WELL: (SILT SUMP)			
TYPE: <u>PVC cap</u> BSC: <u>15.3</u> POW: <u>16.0'</u>			
GROUT:			
TG: <u>Ground</u> TYPE: <u>Cement-beatone</u> LENGTH: <u>3.0'</u>			
SEAL:			
TBS: <u>3.0'</u> TYPE: <u>Bentonite pellets</u> LENGTH: <u>1.8'</u>			
SAND PACK:			
TSP: <u>#3-5.3' #1-4.8'</u> TYPE: <u>#3, #1 Silica</u> LENGTH: <u>10.2'</u>			
SURFACE COLLAR:			
TYPE: <u>Cement</u> RADIUS: <u>2' x 2'</u> THICKNESS CENTER: <u>1'</u> THICKNESS EDGE: <u>1'</u>			
CENTRALIZER DEPTHS			
DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____			
COMMENTS:			

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

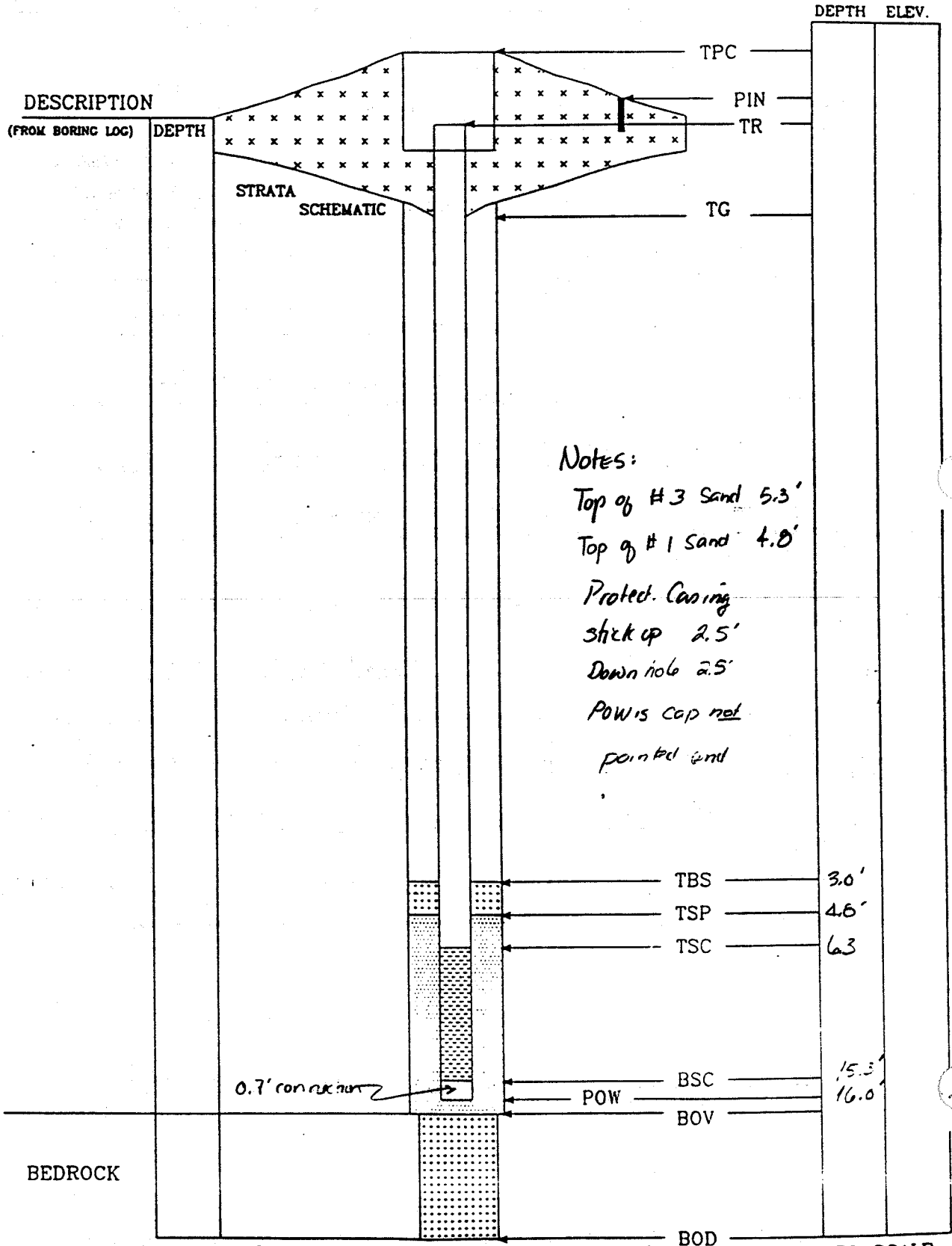
OVERBURDEN MONITORING WELL
ROADWAY BOX INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT: *ACOE*

WELL #: *MW13-5*

DATE *11/19/93*



Notes:
 Top of #3 Sand 5.3'
 Top of #1 Sand 4.8'
 Protect. Casing
 stick up 2.5'
 Down hole 2.5'
 POW is cap not
 pointed end

0.7' connector

BEDROCK

Note: All depths measured from ground surface.

• NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT: <u>ACOE</u>		WELL #: <u>13-6</u>	
PROJECT: <u>10 SWMU</u>	PROJECT NO: _____		
LOCATION: <u>SEAD 13</u>	INSPECTOR: <u>ES/MB/KK</u>		
		CHECKED BY: _____	
DRILLING CONTRACTOR: <u>Empire</u>	POW DEPTH: <u>10.0'</u>		
DRILLER: <u>Scott</u>	INSTALLATION STARTED: <u>12-15-93</u>		
DRILLING COMPLETED: <u>12-15-93</u>	INSTALLATION COMPLETED: <u>12-15-93</u>		
BORING DEPTH: <u>10.0'</u>	SURFACE COMPLETION DATE: <u>12-17-93</u>		
DRILLING METHOD(S): <u>HSA</u>	COMPLETION CONTRACTOR/CREW: <u>Empire/Scott</u>		
BORING DIAMETER(S): <u>8 1/2"</u>	BEDROCK CONFIRMED (Y/N): _____		
ASSOCIATED SWMU/AOC: <u>13</u>	ESTIMATED GROUND ELEVATION: _____		
PROTECTIVE SURFACE CASING:			
DIAMETER: <u>4" x 4" Steel</u>		LENGTH: _____	
RISER:			
TR: _____	TYPE: <u>PVC-40</u>	DIAMETER: <u>2"</u>	LENGTH: _____
SCREEN:			
TSC: <u>5.0'</u>	TYPE: <u>PVC-40</u>	DIAMETER: <u>2"</u>	LENGTH: <u>4'</u>
			SLOT SIZE: <u>0.01"</u>
POINT OF WELL: (SILT SUMP)			
TYPE: <u>PVC point</u>	BSC: <u>9.0'</u>	POW: <u>10.0</u>	
GROUT:			
TG: <u>Grout</u>	TYPE: <u>Cem-bentonite</u>	LENGTH: <u>2.5'</u>	
SEAL:	TBS: <u>2.5'</u>	TYPE: <u>bentonite pills</u>	LENGTH: <u>1.0'</u>
SAND PACK:	TSP: <u>3.5' - #1 90-#3</u>	TYPE: <u>#3 + #1</u>	LENGTH: <u>6.5'</u>
SURFACE COLLAR:			
TYPE: _____	RADIUS: <u>2' x 2'</u>	THICKNESS CENTER: <u>1'</u>	THICKNESS EDGE: <u>1'</u>
CENTRALIZER DEPTHS			
DEPTH 1: _____	DEPTH 2: _____	DEPTH 3: _____	DEPTH 4: _____
COMMENTS:			
* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE			

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

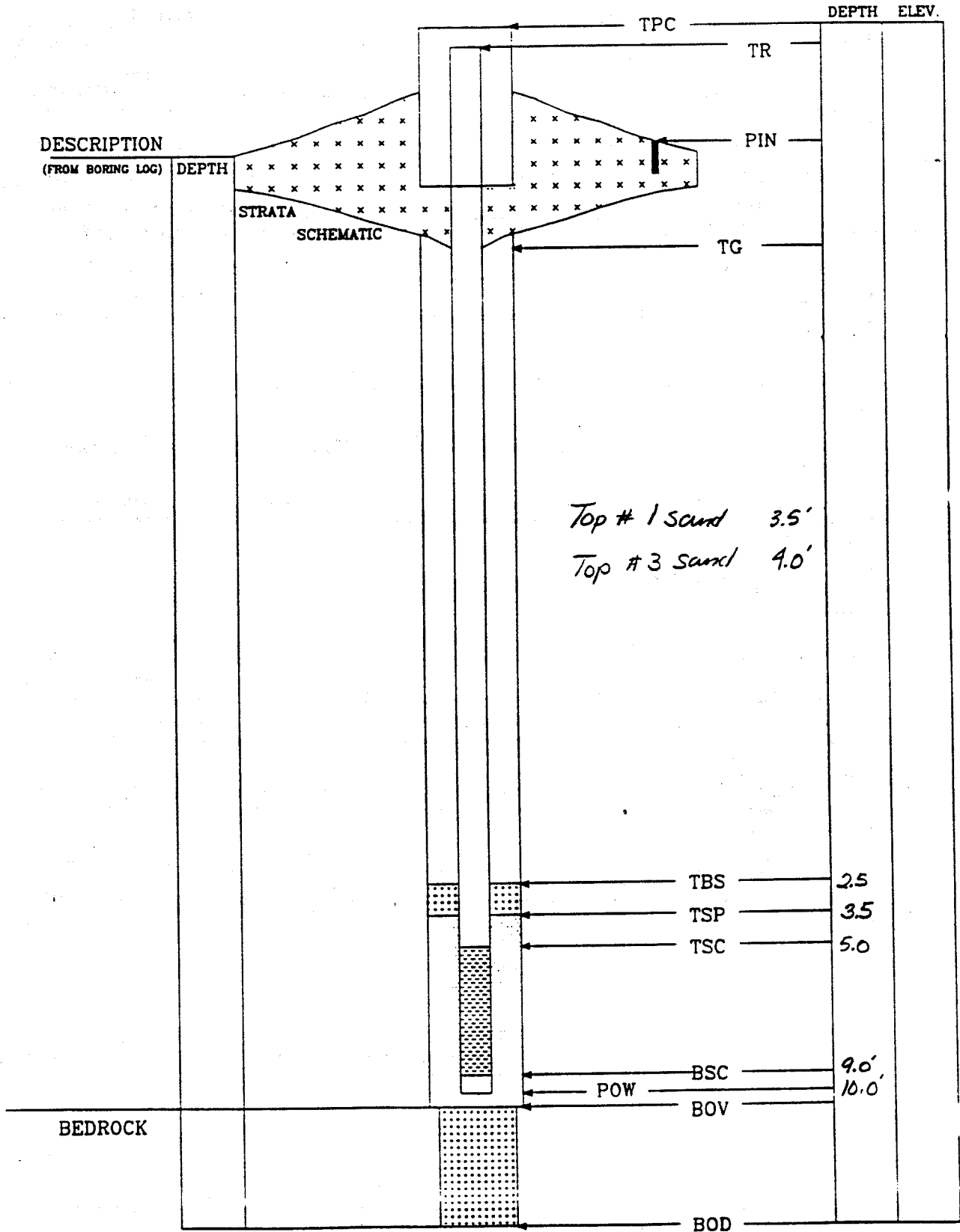
OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT: *ACOE*

WELL #: *MW13-6*

DATE: _____



• NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION			
ENGINEERING-SCIENCE, INC. CLIENT:		WELL #: MW 13.7	
PROJECT: 10 SWMU ESI		PROJECT NO: 720478-01001	
LOCATION: Seneca Army Depot, Romulus, NY		INSPECTOR: KY BK	
DRILLING CONTRACTOR: EMPIRE SOILS		POW DEPTH: 8.0 ft	
DRILLER: JOHN ED		INSTALLATION STARTED: 1-24-94	
DRILLING COMPLETED: 1-24-94		INSTALLATION COMPLETED: 1-24-94	
BORING DEPTH: 8.0 ft		SURFACE COMPLETION DATE: 1-25-94	
DRILLING METHOD(S): Hollow Stem Auger		COMPLETION CONTRACTOR/CREW: NA	
BORING DIAMETER(S): 8.5 in		BEDROCK CONFIRMED (Y/N):	
ASSOCIATED SWMU/AOC: SEAD 13		ESTIMATED GROUND ELEVATION:	
PROTECTIVE SURFACE CASING:			
DIAMETER: 2 in		LENGTH:	
RISER:			
TR: + 2.5 ft		TYPE: PVC	
DIAMETER: 2 in		LENGTH:	
SCREEN:			
TSC: 5.0 ft		TYPE: PVC	
DIAMETER: 2 in		LENGTH: 2 ft	
SLOT SIZE: 1/100 in			
POINT OF WELL: (SILT SLUMP)			
TYPE: PVC		BSC: 7.0 ft	
POW: 8.0			
GROUT: NA			
TG:		TYPE:	
LENGTH:			
SEAL:			
TBS: 3.0 ft		TYPE: bentonite pellets	
LENGTH: 1.0 ft			
SAND PACK:			
TSP: 4.0 ft		TYPE: #3 PCL - 8.0 to 4.5 ft	
LENGTH: 4.5 ft		#1 PCL - 4.5 to 4.0 ft	
SURFACE COLLAR:			
TYPE: Quikrete		RADIUS: 1 ft	
THICKNESS CENTER: 3.0 ft		THICKNESS EDGE: .5 ft	
CENTRALIZER DEPTHS NA			
DEPTH 1:		DEPTH 2:	
DEPTH 3:		DEPTH 4:	
COMMENTS:			
* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE			

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

p2 of 3

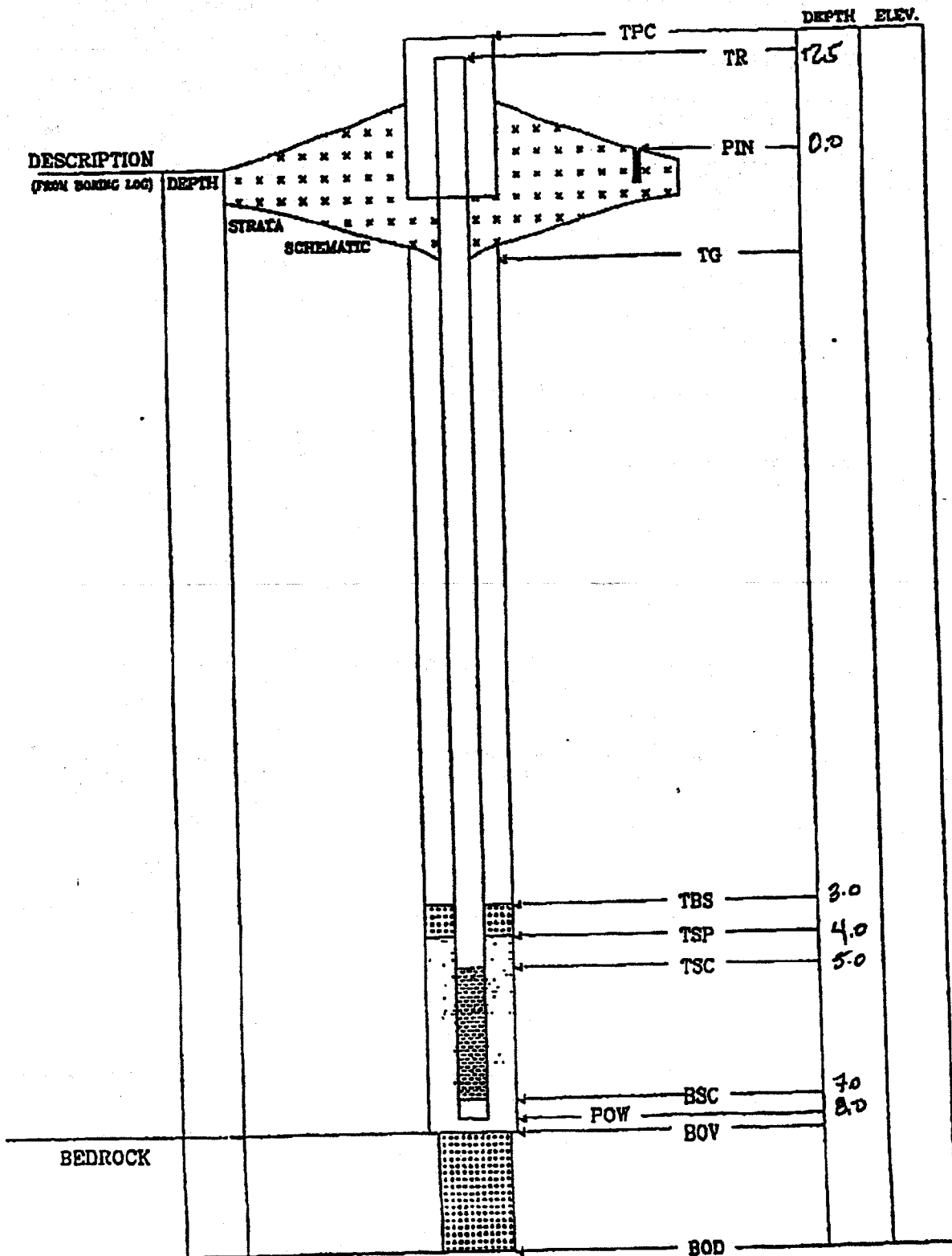
OVERBURDEN MONITORING WELL
PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT: USAOE

WELL #: MW13-7

DATE: 1-24-94



Contractor: SJB, Inc. Driller: John Warner Inspector: E. Ashton Rig Type: Mobile	PARSONS ENGINEERING SCIENCE, INC. DRILLING RECORD	BORING/ WELL NO. Sheet # 1 of 1 # SB-13-11/MW-13-11
	PROJECT NAME: Seneca Army Depot-SEAD-13	Location Description: SEE SITE PLAN
	PROJECT NUMBER: 736994	

GROUNDWATER OBSERVATIONS				Weather: Cloudy-70' F Date/Time Start: 8/16/01-0925 Date/Time Finish: 8/16/01-1310	Location Plan
Water Level	Dry	Dry	Dry		SEE SITE PLAN
Date	8/17/01	8/22/01	9/04/01		
Time	0825	1010	1130		
Meas. From	TOC	TOC	TOC		

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHMATIC 2.5"-stick-up	COMMENTS	
0	134016 (0-2)	5/9 16/15	50	696	(0'-2') Brown to light Grey, silt with clay, trace of fine sand and fine gravel (weathered shale), roots, dry.-ML/SC		Grout 0-1'	
1							1'	2" PVC Riser
2		14/16 21/21	50	175	(2'-4') Light Brown, fine sand with silt, fine to medium gravel (weathered shale), dry.-SM/SC			Bentonite Pellets 1-3.5'
3							3.5'	
4		9/16 22/28	50	190	(4'-6') Brown, silt with clay, fine to medium gravel (weathered shale), trace of fine sand, dry.-ML/SC			4.5'
5								
6		53/60 67/	80	91	(6'-8') Same as above.- ML/SC			Filtered sand (#0) pack-3.5-15'
7		100/4						0.010 Slot Sch. 40 PVC Screen-4.5'-14.5'
8	134017 (8-10)	13/19 24/37	80	264	(8'-10') Light Grey, fine to medium sand, fine to course gravel (weathered shale), silt, dry.-SM/SC			
9								
10		13/37 100/4	80	106	(10'-11.8) Same as above.-SM/SC Refusal at 11.8' bgs. Note: Drilled to 15' bgs with HSAs.			
11								
12								
13								
14								
15							14.5'	
					Terminated soil boring at 15 feet bgs.		15' Sump (14.5-15')	

SAMPLING METHOD SS - SPLIT SPOON A - AUGER CUTTINGS C - CORED	COMMENTS: Collected soil samples 134016 (0'-2) bgs and 134017 (8'-10') bgs for B/N/A SVOCs, TAL Metals, Cyanide, and Nitrate analysis. Additionally, collected soil samples 134017 (8'-10') bgs MS & MSD for same analysis mention above. Installed 2-inch monitoring well.
---	---

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

PROTECTIVE RISER COMPLETION

PARSONS ENGINEERING SCIENCE, INC.		CLIENT: <u>ACOE</u>	WELL #: <u>MW-13-11</u>
PROJECT: <u>10 SWM4</u>		PROJECT NO: <u>736994</u>	
LOCATION: <u>SEAD 13</u>		INSPECTOR: <u>Ed Ashton</u>	
		CHECKED BY: <u>Ed Ashton</u>	
DRILLING CONTRACTOR: <u>STB, Inc.</u>	POW DEPTH: <u>15'</u>		
DRILLER: <u>John Warner</u>	INSTALLATION STARTED: <u>8/16/01 @ 0925</u>		
DRILLING COMPLETED: <u>8/16/01</u>	INSTALLATION COMPLETED: <u>8/16/01 @ 1310</u>		
BORING DEPTH: <u>15'</u>	SURFACE COMPLETION DATE: <u>8/17/01</u>		
DRILLING METHOD(S): <u>HSA</u>	COMPLETION CONTRACTOR/CREW: <u>STB, Inc.</u>		
BORING DIAMETER(S): <u>8 1/2" - in</u>	BEDROCK CONFIRMED (Y/N?): _____		
ASSOCIATED SWMU/AOC: <u>13</u>	ESTIMATED GROUND ELEVATION: _____		
PROTECTIVE SURFACE CASING:			
DIAMETER: <u>4x4" steel</u>		LENGTH: <u>3.5'</u>	TOR: _____
RISER:			
TOC: _____	TYPE: <u>PVC 40</u>	DIAMETER: <u>2"</u>	LENGTH: _____
SCREEN:			
TSC: <u>4.5'</u>	TYPE: <u>PVC 40</u>	DIAMETER: <u>2"</u>	LENGTH: <u>10'</u> SLOT SIZE: <u>0.01"</u>
POINT OF WELL: (SILT SUMP)			
YPE: <u>PVC Point</u>	BSC: <u>14.5'</u>	POW: <u>15'</u>	
GROUT:			
TG: <u>Ground</u>	TYPE: <u>Cement-Best.</u>	LENGTH: <u>1.0'</u>	
SEAL: _____	TBS: <u>1.0'</u>	TYPE: <u>Bent. pellets</u>	LENGTH: <u>2.5'</u>
SAND PACK: _____	TSP: <u>3.5'</u>	TYPE: <u>40</u>	LENGTH: <u>11.5'</u>
SURFACE COLLAR:			
TYPE: _____	RADIUS: <u>2x2'</u>	THICKNESS CENTER: <u>1'</u>	THICKNESS EDGE: <u>1'</u>
CENTRALIZER DEPTHS			
DEPTH 1: _____	DEPTH 2: _____	DEPTH 3: _____	DEPTH 4: _____
COMMENTS:			

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

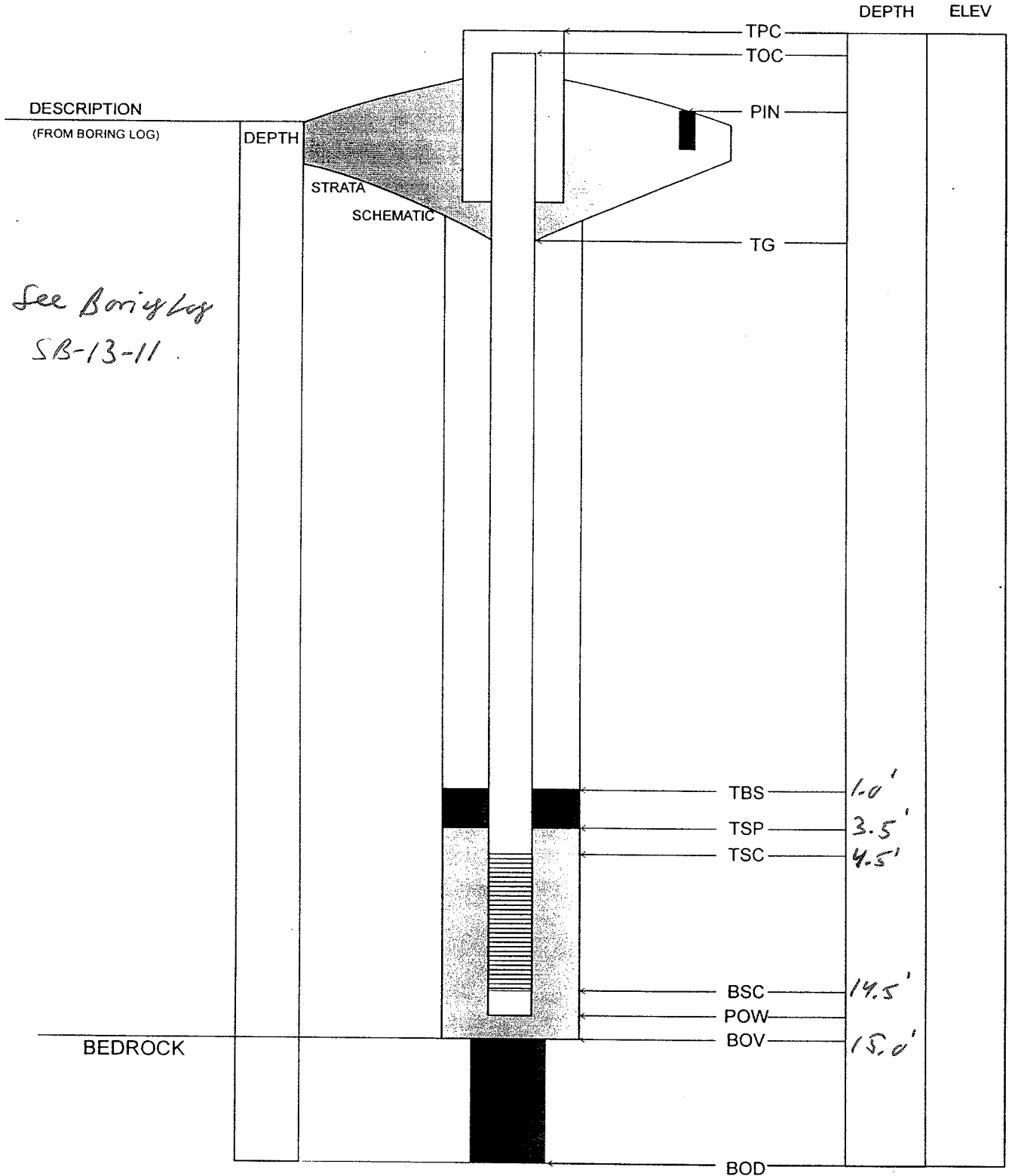
OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

PARSONS ENGINEERING SCIENCE, INC.

CLIENT: *ALCOE*

WELL #: *MW-13-11*

DATE: *8/18/01*



Contractor: SJB, Inc. Driller: John Warner Inspector: E. Ashton Rig Type: Mobile	PARSONS ENGINEERING SCIENCE, INC. DRILLING RECORD	BORING/ WELL NO. Sheet # 1 of 1 # SB-13-12/MW-13-12 Location Description: SEE SITE PLAN
PROJECT NAME: Seneca Army Depot-SEAD-13 PROJECT NUMBER: 736994		

GROUNDWATER OBSERVATIONS						Location Plan
Water Level	Dry	Dry	9.45		Weather: Sunny-70°F	SEE SITE PLAN
Date	8/17/01	8/22/01	9/4/01		Date/Time Start: 8/15/01-1000	
Time	0830	1020	1233		Date/Time Finish: 8/15/01-1306	
Meas. From	TOC	TOC	TOC			

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC 2.5'-stick-up	COMMENTS
0	134018 (0-2)	2/3 5/6	80	157	(0'-2') Brown, clay with silt, trace of fine sand, roots, dry to moist. CL/ML		Grout 0-1' 2" PVC Riser 1' Bentonite Pellets 1-1.75' 1.75' 2' Filtered sand (#0) pack-1.75-11.3'
1							
2		8/21 18/16	50	74	(2'-3.5') Brown to light Brown, clay with silt, trace of fine sand, dry. CL/ML		
3							
4		16/29 35/37	50	90.5	(3.5'-4') Light Grey to light Brown, silt with clay, trace of fine sand and fine to medium gravel (weathered shale), dry.- ML/SC (4'-6) Grey to Light Grey, silt with clay, trace of fine sand, fine to medium gravel (weathered shale), dry. - ML/SC		
5							
6	134019 (6-8)	62/76 67/67	90	100	(6'-8') Brown to light Grey, silt, trace of clay and fine sand, fine to medium gravel (weathered shale), dry.- ML/SC		
7							
8		16/32 46/66	80	25	(8'-10') Same as above, except for soil Grey in color.		
9							
10		36/58 100/.3	50	82.2	(10'-11.3') Same as above. Refusal at 11.3' bgs. Weathered shale at tip of spoon.		
11							
12					Terminated soil boring at 11.3 feet bgs.		

SAMPLING METHOD SS = SPLIT SPOON A = AUGER CUTTINGS C = CORED	COMMENTS: Collected soil samples 134018 (0'-2') bgs and 134019 (6'-8') bgs for B/N/A SVOCs, TAL Metals, Cyanide, and Nitrate analysis. Installed 2-inch monitoring well.
---	---

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

PROTECTIVE RISER COMPLETION

PARSONS ENGINEERING SCIENCE, INC.		CLIENT: <u>ACOE</u>	WELL #: <u>MW-13-12</u>
PROJECT: <u>10SWMU</u>		PROJECT NO: <u>736994</u>	
LOCATION: <u>SBAD13</u>		INSPECTOR: <u>Ed Ashton</u>	
		CHECKED BY: <u>Ed Ashton</u>	
DRILLING CONTRACTOR: <u>STB, Inc.</u>	POW DEPTH: <u>11.3'</u>		
DRILLER: <u>John Warner</u>	INSTALLATION STARTED: <u>8/15/01 @ 1000</u>		
DRILLING COMPLETED: <u>8/15/01</u>	INSTALLATION COMPLETED: <u>8/15/01 @ 1306</u>		
BORING DEPTH: <u>11.3'</u>	SURFACE COMPLETION DATE: <u>8/17/01</u>		
DRILLING METHOD(S): <u>HSA</u>	COMPLETION CONTRACTOR/CREW: <u>STB, Inc.</u>		
BORING DIAMETER(S): <u>8 1/2" in</u>	BEDROCK CONFIRMED (Y/N?): _____		
ASSOCIATED SWMU/AOC: <u>13</u>	ESTIMATED GROUND ELEVATION: _____		

PROTECTIVE SURFACE CASING:

DIAMETER: 4" x 4" steel LENGTH: 3.5' TOR: _____

RISER:

TOC: _____ TYPE: PVC 40 DIAMETER: 2" LENGTH: _____

SCREEN:

TSC: 2' TYPE: PVC 40 DIAMETER: 2" LENGTH: 7.3' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)

YPE: PVC Point BSC: 9.3' POW: 10.0'

GROUT:

TG: Ground TYPE: Cement-Bent. LENGTH: 1.0'

SEAL: TBS: 1.0' TYPE: Bent. pellets LENGTH: 0.75'

SAND PACK: TSP: 1.75' TYPE: #0 LENGTH: 9.85'

SURFACE COLLAR:

TYPE: _____ RADIUS: 2' x 2' THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS

DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

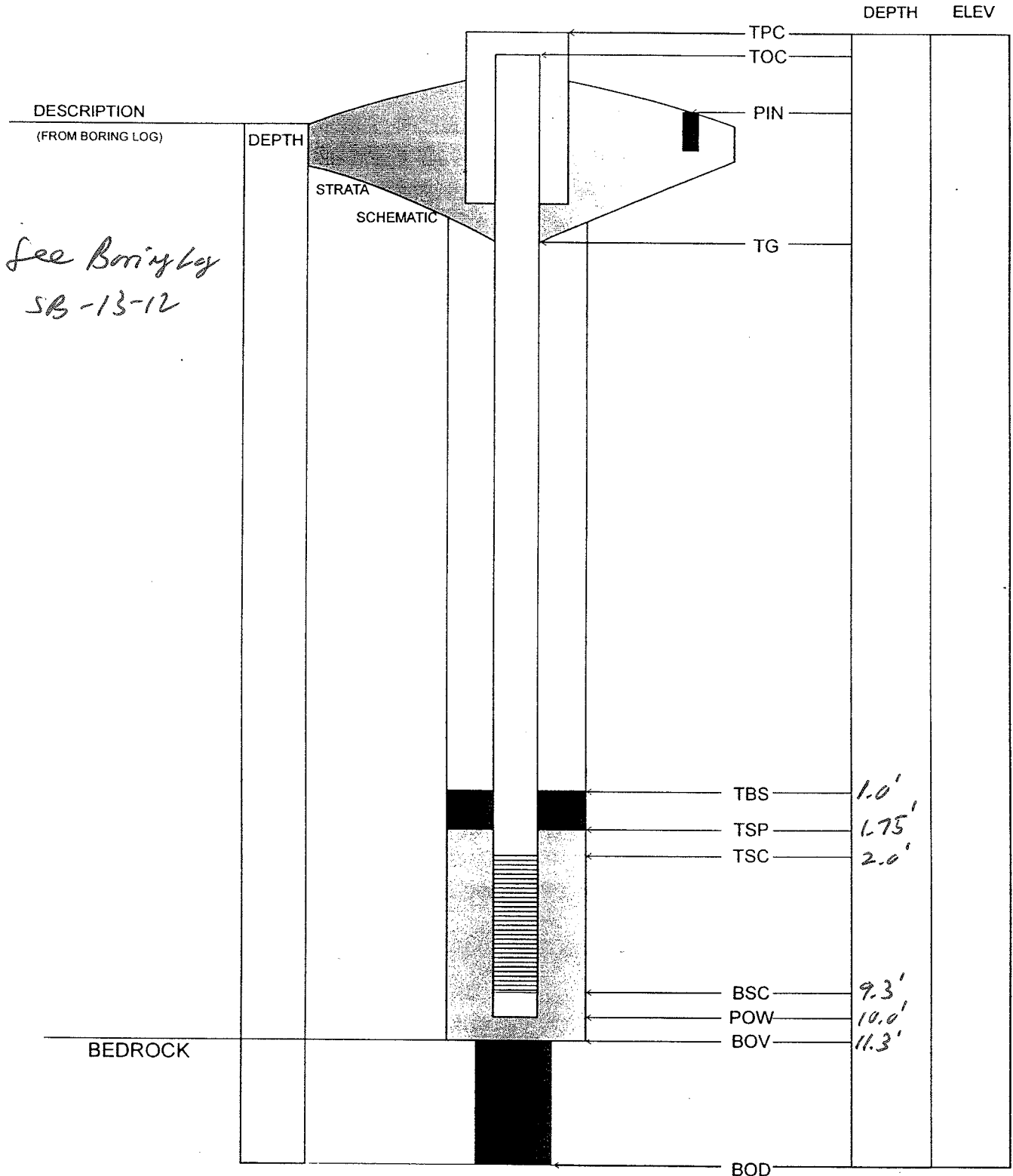
OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

PARSONS ENGINEERING SCIENCE, INC.

CLIENT: *ALCOE*

WELL #: *MW-13-12*

DATE: *8/15/01*



Contractor: SJB, Inc. Driller: John Warner Inspector: E. Ashton Rig Type: Mobile	PARSONS ENGINEERING SCIENCE, INC. DRILLING RECORD	BORING/ WELL NO. SB-13-13/MW-13-13 Sheet # 1 of 1 #
	PROJECT NAME: Seneca Army Depot-SEAD-13 PROJECT NUMBER 736994	Location Description: SEE SITE PLAN

GROUNDWATER OBSERVATIONS					Weather: Sunny-70°F	Location Plan
Water Level 5.80' 8.10' 9.15 Date 8/17/01 8/22/01 9/04/01 Time 0815 0955 1121 Meas. From TOC TOC TOC	Date/Time Start: 8/15/01-1420 Date/Time Finish: 8/15/01-1741		SEE SITE PLAN			

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHMATIC 2.5'-stick-up	COMMENTS
0	134012 (0-2)	5/9 16/15	50	403	(0'-2') Brown, silt with clay, trace of fine sand, roots, dry. -ML/SC		Grout 0-1'
1	134020 (0-2)				(2'-4') Same as above.- ML/SC		1' 2" PVC Riser
2		2/14 16/21	80	46			Bentonite Pellets 1-3.5'
3							3.5'
4		3/9 16/22	90	43.7	(4'-6') Brown, silt, trace of clay and fine sand, dry.- SC/ML		4.5'
5							
6		4/53 60/67	90	20	(6'-8') Same as above.- SC/ML		Filtered sand (#0) pack-3.5-15'
7							0.010 Slot Sch. 40 PVC Screen-4.5'-14.5'
8	134013 (8-10)	5/13 14/24	80	22	(8'-10') Brown to Grey, clay with silt, trace of fine sand and fine gravel, dry.-CL/ML		
9							
10		13/37 100/3	50	21	(10'-11.5') Grey, clay with silt, fine to course gravel (weathered shale), wet.-CL/ML		
11					Refusal at 11.5' bgs.		
12					Note: Drilled to 15' bgs with HSAs.		
13							
14							
15					Terminated soil boring at 15 feet bgs.		14.5' Sump (14.5-15')

SAMPLING METHOD
 SS - SPLIT SPOON
 A - AUGER CUTTINGS
 C - CORED

COMMENTS:
 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

13

PARSONS ENGINEERING SCIENCE, INC. CLIENT: ACOE WELL #: MW-13-X

PROJECT: 10 SWMU PROJECT NO: 736994
 LOCATION: SEA 013 INSPECTOR: Ed Ashton
 CHECKED BY: Ed Ashton

DRILLING CONTRACTOR: SJB, Inc. POW DEPTH: 15'
 DRILLER: John Warner INSTALLATION STARTED: 8/15/01 @ 1420
 DRILLING COMPLETED: 8/15/01 INSTALLATION COMPLETED: 8/15/01 @ 1741
 BORING DEPTH: 15' SURFACE COMPLETION DATE: 8/17/01
 DRILLING METHOD(S): HSA COMPLETION CONTRACTOR/CREW: SJB
 BORING DIAMETER(S): 8 1/2" BEDROCK CONFIRMED (Y/N?): _____
 ASSOCIATED SWMU/AOC: 13 ESTIMATED GROUND ELEVATION: _____

PROTECTIVE SURFACE CASING:
 DIAMETER: 4" x 4" steel LENGTH: 3.5' TOR: _____

RISER:
 TOC: _____ TYPE: PVC 40 DIAMETER: 2" LENGTH: _____

SCREEN:
 TSC: 4.5' TYPE: PVC 40 DIAMETER: 2" LENGTH: 10' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)
 YPE: PVC Point BSC: 14.5' POW: 15'

GROUT:
 TG: Gravel TYPE: Cement-Best. LENGTH: 1.0'

SEAL:
 TBS: 1.0' TYPE: Best. pellets LENGTH: 2.5'

SAND PACK:
 TSP: 3.5' TYPE: #0 LENGTH: 11.5'

SURFACE COLLAR:
 TYPE: _____ RADIUS: 2' x 2' THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS
 DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

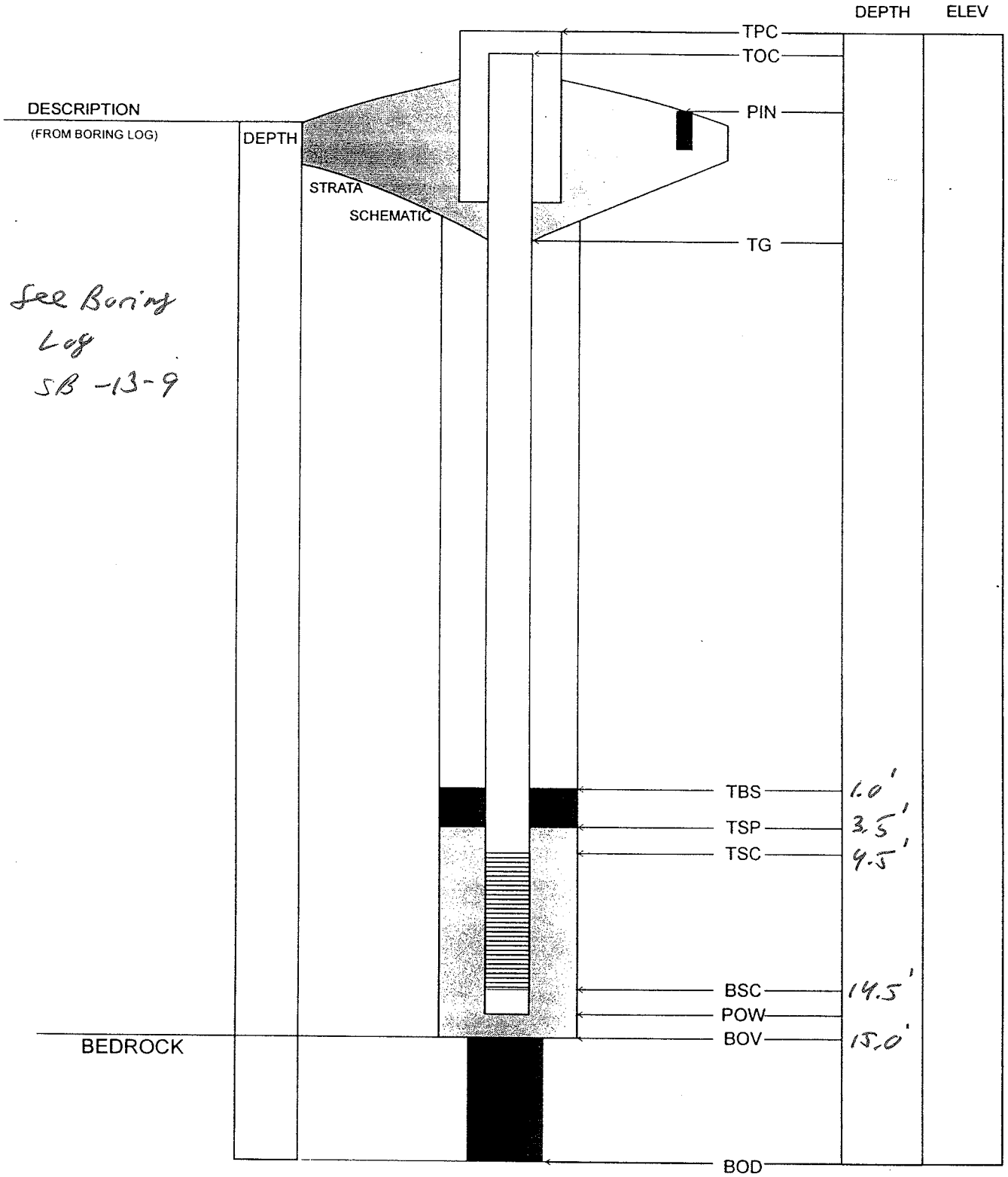
CAF

PARSONS ENGINEERING SCIENCE, INC.

CLIENT: *ACOE*

WELL #: *MW-13-93*

DATE: *8/15/01*



well.caf
General Form 101

Contractor: <u>SJB, Inc.</u> Driller: <u>John Warner</u> Inspector: <u>E. Ashton</u> Rig Type: <u>Mobile</u>	PARSONS ENGINEERING SCIENCE, INC. DRILLING RECORD	BORING/ WELL NO. <u>SB-13-14/MW-13-14</u> Location Description: <u>SEE SITE PLAN</u>
PROJECT NAME: <u>Seneca Army Depot-SEAD-13</u> PROJECT NUMBER: <u>736994</u>		Sheet # <u>1</u> of <u>1</u> #

GROUNDWATER OBSERVATIONS					Weather: <u>Cloudy-70°F</u>	Location Plan
Water Level	Dry	Dry	Dry		Date/Time Start: <u>8/16/01-1404</u>	SEE SITE PLAN
Date	8/17/01	8/22/01	9/04/01		Date/Time Finish: <u>8/16/01-1711</u>	
Time	0820	1000	1136			
Meas. From	TOC	TOC	TOC			

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC 2.5'-stick-up	COMMENTS
0	134014	7/17	50	383	(0'-2') Brown, silt, fine sand, trace of clay, roots, dry.-ML/SC		Grout 0-1'
1	(0-2)	10/16					1' 2" PVC Riser
2		100/4	20	320	(2'-4') Same as above. Encountered refusal at 2.4' bgs. Drilled with HSAs to 4' bgs.	←	Bentonite Pellets 1-3.5'
3							3.5'
4		21/41	50	55	(4'-5.4') Brown, silt, fine to medium gravel (weathered shale), fine sand, trace of clay, dry.-ML/SC		4.5'
5		100/4			Refusal at 5.4' bgs. Drilled with HSAs to 6' bgs.		
6		10/26	80	50.1	(6'-8') Brown to light Grey, silt, fine sand, clay, fine to medium gravel (weathered shale), dry.-ML/SC	←	Filtered sand (#0) pack-3.5-15'
7		66/82				←	0.010 Slot Sch. 40 PVC Screen-4.5'-14.5'
8		19/	10	80	(8'-9') Same as above.-ML/SC		
9		100/4			Refusal at 9' bgs. Drilled with HSAs to 10' bgs.		
10	134015	27/52	50	90	(10'-11.5') Same as above.-ML/SC		
11	(10-11.5)	103			Refusal at 11.5' bgs. Note: Drilled to 15' bgs with HSAs.		
12							
13							
14							
15							14.5' 15' Sump (14.5-15')
					Terminated soil boring at 15 feet bgs.		

SAMPLING METHOD
 SS = SPLIT SPOON
 A = AUGER CUTTINGS
 C = CORED

COMMENTS:
 Collected soil samples 134014 (0'-2') bgs and 134015 (10'-11.5') bgs for B/N/A SVOCs, TAL Metals, Cyanide, and Nitrate analysis. Installed 2-inch monitoring well. In field notebook as SB/MW13-10 for work during August and September 2001.

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

PROTECTIVE RISER COMPLETION

PARSONS ENGINEERING SCIENCE, INC.		CLIENT: <u>ACOE</u>	WELL #: <u>MW-13-10</u>	
PROJECT: <u>10 SWMU</u>		PROJECT NO: <u>736 944</u>		
LOCATION: <u>SEAD 13</u>		INSPECTOR: <u>Ed Ashton</u>		
		CHECKED BY: <u>Ed Ashton</u>		
DRILLING CONTRACTOR: <u>SJB, Inc.</u>		POW DEPTH: <u>15'</u>		
DRILLER: <u>John Warner</u>		INSTALLATION STARTED: <u>8/16/01 c 1909</u>		
DRILLING COMPLETED: <u>8/16/01</u>		INSTALLATION COMPLETED: <u>8/16/01 c</u>		
BORING DEPTH: <u>15'</u>		SURFACE COMPLETION DATE: <u>8/17/01</u>		
DRILLING METHOD(S): <u>HSA</u>		COMPLETION CONTRACTOR/CREW: <u>SJB, Inc.</u>		
BORING DIAMETER(S): <u>8 1/2" - 14"</u>		BEDROCK CONFIRMED (Y/N?): _____		
ASSOCIATED SWMU/AOC: <u>13</u>		ESTIMATED GROUND ELEVATION: _____		
PROTECTIVE SURFACE CASING:				
DIAMETER: <u>4" x 4" steel</u>		LENGTH: <u>3.5'</u>		TOR: _____
RISER:				
TOC: _____		TYPE: <u>PVC 40</u>		DIAMETER: <u>2"</u> LENGTH: _____
SCREEN:				
TSC: <u>4.5'</u>		TYPE: <u>PVC 40</u>		DIAMETER: <u>2"</u> LENGTH: <u>10'</u> SLOT SIZE: <u>0.01"</u>
POINT OF WELL: (SILT SUMP)				
YPE: <u>PVC Point</u>		BSC: <u>14.5'</u>		POW: <u>15'</u>
GROUT:				
TG: <u>Ground</u>		TYPE: <u>Cement-Bent.</u>		LENGTH: <u>1.0'</u>
SEAL: TBS: <u>1.0'</u>		TYPE: <u>Bent. pellets</u>		LENGTH: <u>2.5'</u>
SAND PACK: TSP: <u>3.5'</u>		TYPE: <u>#0</u>		LENGTH: <u>11.5'</u>
SURFACE COLLAR:				
TYPE: _____		RADIUS: <u>2' x 2'</u>		THICKNESS CENTER: <u>1'</u> THICKNESS EDGE: <u>1'</u>
CENTRALIZER DEPTHS				
DEPTH 1: _____		DEPTH 2: _____		DEPTH 3: _____ DEPTH 4: _____
COMMENTS:				

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

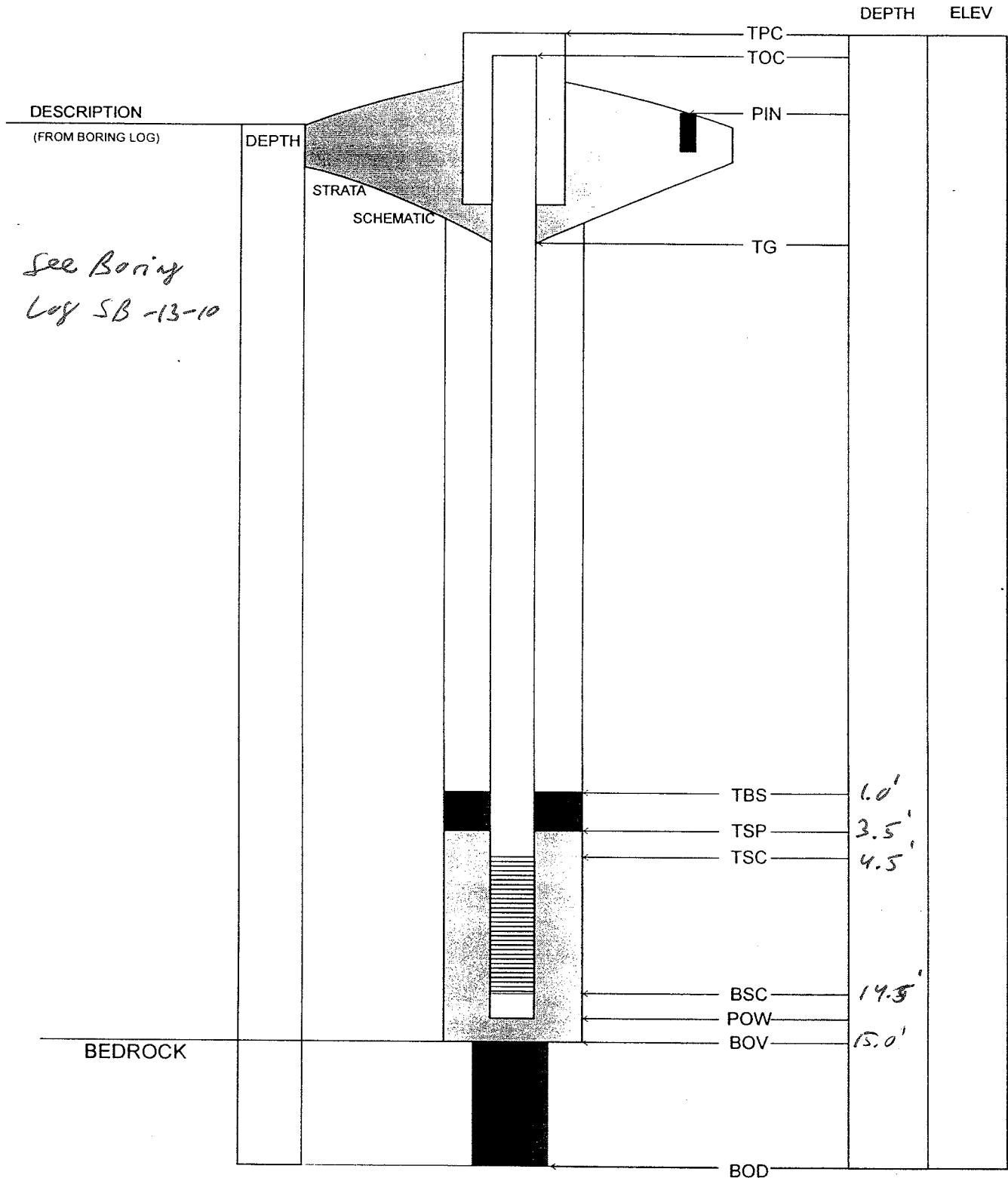
OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

PARSONS ENGINEERING SCIENCE, INC.

CLIENT: *ACOE*

WELL #: *MW-13-10*

DATE: *8/16/01*



OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

ENGINEERING-SCIENCE, INC.		CLIENT: <u>ACOE</u>	WELL #: <u>MW24-1</u>	
PROJECT: <u>10 SWMU</u>	LOCATION: <u>SEAD 24</u>		PROJECT NO: <u>SB24-5</u>	INSPECTOR: _____
DRILLING CONTRACTOR: <u>Empire</u>			POW DEPTH: <u>10.0'</u>	DRILLER: <u>Scott</u>
DRILLING COMPLETED: <u>12-1-93</u>			INSTALLATION STARTED: <u>12-1-93</u>	BORING DEPTH: <u>10.0'</u>
BORING METHOD(S): <u>HSA</u>			INSTALLATION COMPLETED: <u>12-1-93</u>	DRILLING METHOD(S): <u>HSA</u>
BORING DIAMETER(S): <u>8 1/2"</u>			SURFACE COMPLETION DATE: _____	BORING DIAMETER(S): <u>8 1/2"</u>
ASSOCIATED SWMU/AOC: <u>2A</u>			COMPLETION CONTRACTOR/CREW: <u>Empire</u>	ASSOCIATED SWMU/AOC: <u>2A</u>
			BEDROCK CONFIRMED (Y/N?): _____	ESTIMATED GROUND ELEVATION: <u>635.374</u>
PROTECTIVE SURFACE CASING:				
DIAMETER: <u>4" x 4" Steel</u>		LENGTH: _____		
RISER:				
TR: _____	TYPE: <u>PVC-40</u>	DIAMETER: <u>2"</u>	LENGTH: _____	
SCREEN:				
TSC: <u>4.9'</u>	TYPE: <u>PVC-40</u>	DIAMETER: <u>2"</u>	LENGTH: <u>4.0'</u>	SLOT SIZE: <u>0.01"</u>
POINT OF WELL: (SILT SUMP)				
TYPE: <u>PVC point</u>	BSC: <u>8.9'</u>	POW: <u>10.0</u>		
GROUT:				
TG: <u>Ground</u>	TYPE: <u>Cement-bentonite</u>	LENGTH: <u>1.5'</u>		
SEAL:	TBS: <u>1.5'</u>	TYPE: <u>bentonite pellets</u>	LENGTH: <u>1.9'</u>	
SAND PACK:	TSP: <u>3.4' #1 3.9' #3</u>	TYPE: <u>#3, #1</u>	LENGTH: <u>6.6'</u>	
SURFACE COLLAR:				
TYPE: <u>Cement</u>	RADIUS: <u>2' x 2'</u>	THICKNESS CENTER: <u>1'</u>	THICKNESS EDGE: <u>1'</u>	
CENTRALIZER DEPTHS				
DEPTH 1: _____	DEPTH 2: _____	DEPTH 3: _____	DEPTH 4: _____	
COMMENTS:				

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

OVERBURDEN MONITORING WELL PROTECTIVE RISER INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT:

WELL #: MW24-1

DATE: 12-1-93

TPC 638.047 DEPTH ELEV.

DESCRIPTION

(FROM BORING LOG)

DEPTH

STRATA

SCHEMATIC

TR

637.746

PIN

TG

Top of #3 3.9'
Top of #1 34'

TBS

1.5'

TSP

3.9'

TSC

4.9'

BSC

8.9'

POW

10.0'

BOV

BEDROCK

BOD

* NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL ROADWAY BOX - SURFACE COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT: ACOE WELL #: MW 24-2

PROJECT: 10 SWMU PROJECT NO: _____
 LOCATION: SEAD 24 INSPECTOR: ES/LB
 CHECKED BY: _____

DRILLING CONTRACTOR: Empire POW DEPTH: 16.0
 DRILLER: A1 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): BSA COMPLETION CONTRACTOR/CREW: Empire
 BORING DIAMETER(S): 8"2" BEDROCK CONFIRMED (Y/N?): _____
 ASSOCIATED SWMU/AOC: 24 ESTIMATED GROUND ELEVATION: 629.856

PROTECTIVE SURFACE CASING:

DIAMETER: 4" x 4" Steel LENGTH: 5.0' total

RISER:

TR: _____ TYPE: PVC 40 DIAMETER: 2" LENGTH: _____

SCREEN:

TSC: 5.9' TYPE: PVC 40 DIAMETER: 1 1/2" LENGTH: 9.0' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)

TYPE: PVC point BSC: 14.9' POW: 16.0

GROUT:

TG: Ground TYPE: Cem-bentonite LENGTH: 3.0'

SEAL: TBS: 3.0 TYPE: Bentonite pellets LENGTH: 1.4'

SAND PACK: TSP: 4A #1 4.9-#3 TYPE: #3 and #1 LENGTH: 11.6'

SURFACE COLLAR:

TYPE: Cement RADIUS: 2' x 2' THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS

DEPTH 1: _____ DEPTH 2: _____ DEPTH 3: _____ DEPTH 4: _____

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

PAGE 1 OF 2

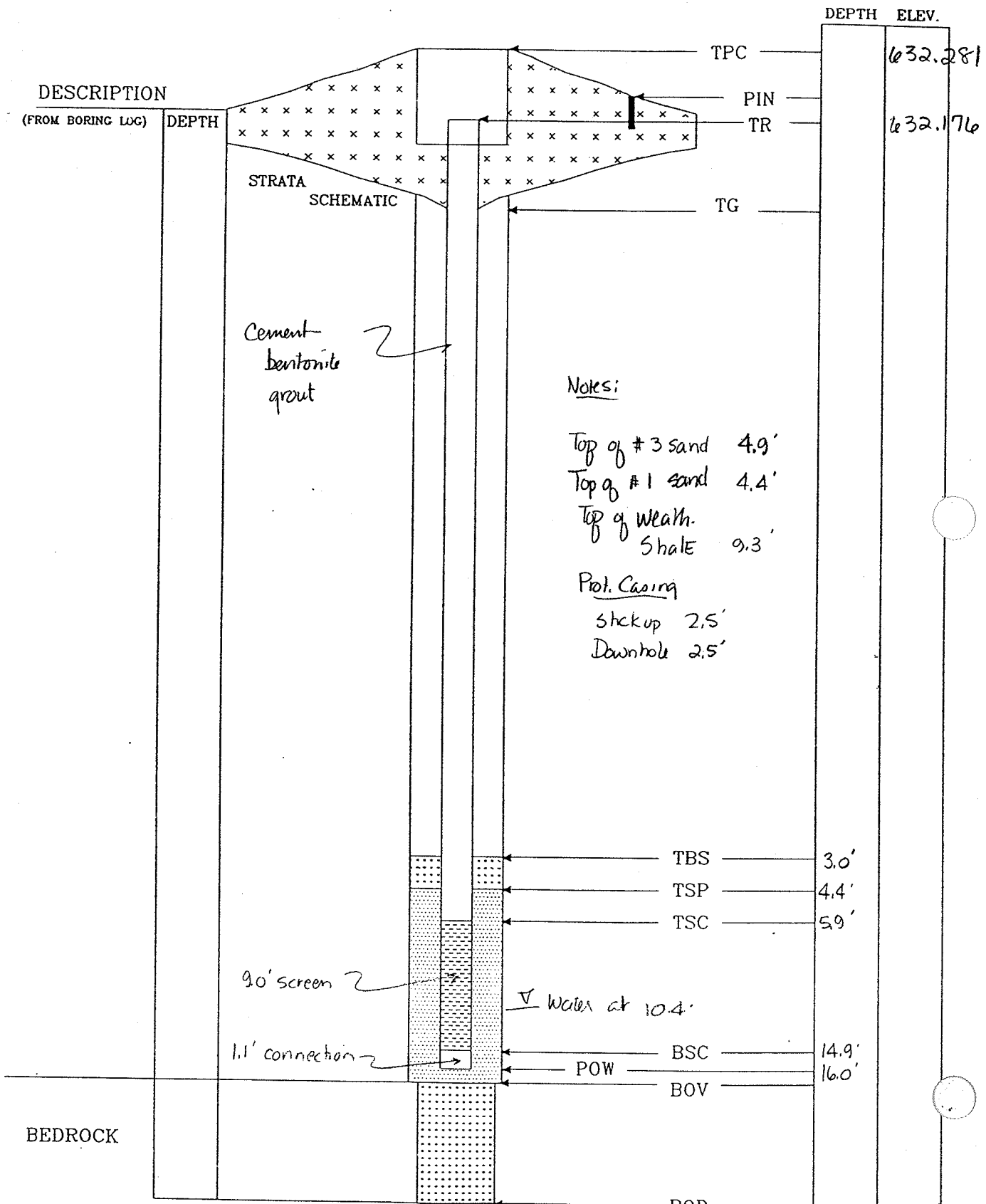
OVERBURDEN MONITORING WELL ROADWAY BOX INSTALLATION DETAIL

ENGINEERING-SCIENCE, INC.

CLIENT:

WELL #: MW24-2

DATE:



Notes:

Top of #3 sand 4.9'
 Top of #1 sand 4.4'
 Top of Weath. Shale 9.3'

Prot. Casing

Stickup 2.5'
 Downhole 2.5'

Cement bentonite grout

90' screen

1.1' connection

BEDROCK

All depths measured to ground surface

* NOT TO SCALE

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL ROADWAY BOX - SURFACE COMPLETION

ENGINEERING-SCIENCE, INC. CLIENT:		WELL #: MW 24-3
PROJECT: 10 SWMU	PROJECT NO: SB	
LOCATION: SEAD 24	INSPECTOR: ES	
		CHECKED BY:

DRILLING CONTRACTOR: Empire	POW DEPTH: 15.0'
DRILLER: AI	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): 8 1/2"	BEDROCK CONFIRMED (Y/N?):
ASSOCIATED SWMU/AOC: 24	ESTIMATED GROUND ELEVATION: 629.080

PROTECTIVE SURFACE CASING:

DIAMETER: 4" x 4" Steel LENGTH: 5.0' total

RISER:

TR: TYPE: PVC 40 DIAMETER: 2" LENGTH:

SCREEN:

TSC: 4.9' TYPE: PVC 40 DIAMETER: 1 1/2" LENGTH: 9' SLOT SIZE: 0.01"

POINT OF WELL: (SILT SUMP)

TYPE: PVC point BSC: 13.9' POW: 15.0'

GROUT:

TG: Ground TYPE: Cem-bentonite LENGTH: 28'

SEAL:

TBS: 2.8' TYPE: Bentonite pellets LENGTH: .6'

SAND PACK:

TSP: 3.0' - #1
3.4' #3 TYPE: #3 & #1 Silica LENGTH: 11.6'

SURFACE COLLAR:

TYPE: Cement RADIUS: 2' x 2' THICKNESS CENTER: 1' THICKNESS EDGE: 1'

CENTRALIZER DEPTHS

DEPTH 1: DEPTH 2: DEPTH 3: DEPTH 4:

COMMENTS:

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

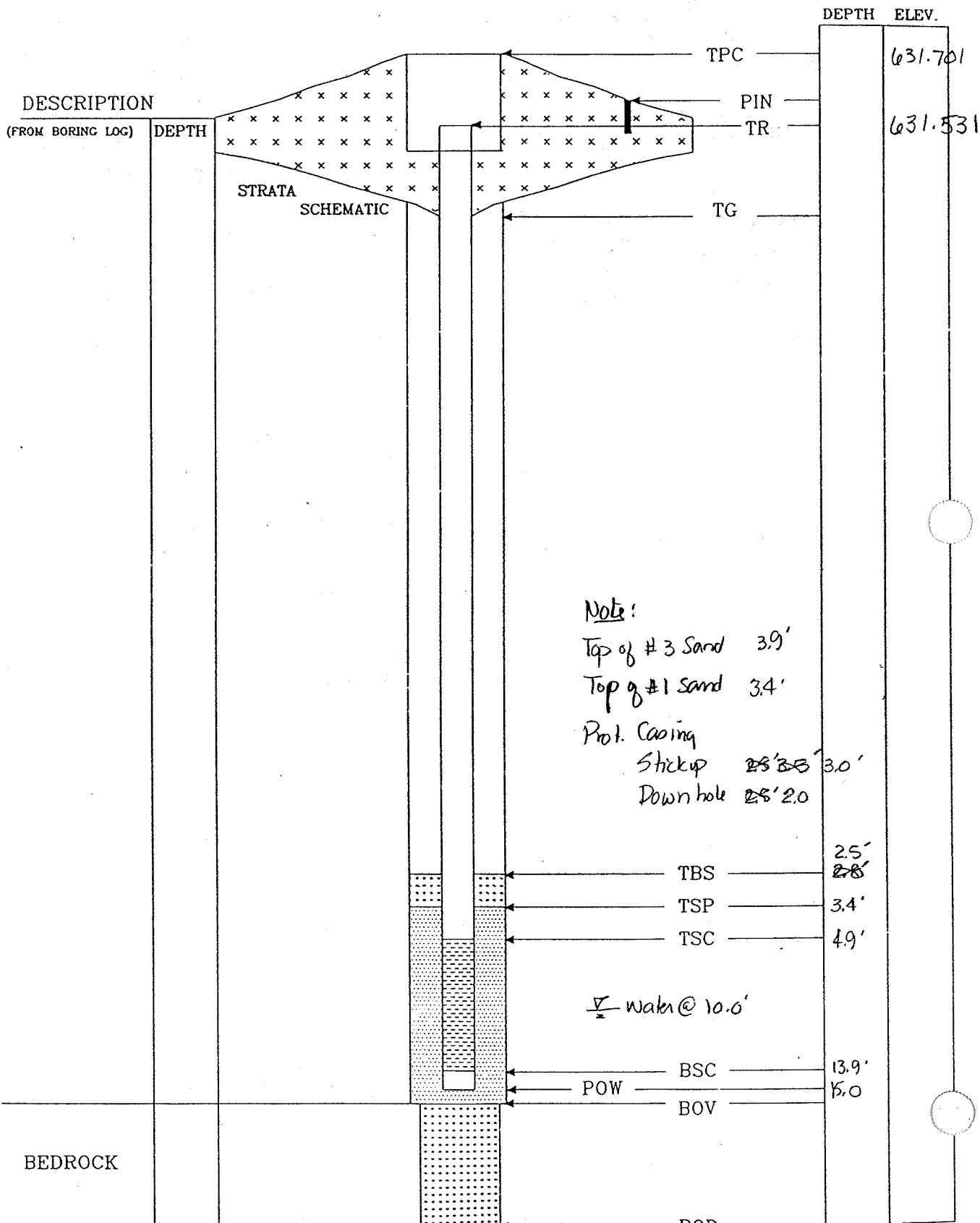
**OVERBURDEN MONITORING WELL
ROADWAY BOX INSTALLATION DETAIL**

ENGINEERING-SCIENCE, INC.

CLIENT:

WELL #: MW24-3

DATE: _____



Note:
 Top of #3 Sand 3.9'
 Top of #1 Sand 3.4'
 Prot. Casing
 Stickup ~~25'30"~~ 3.0'
 Down hole ~~25'20"~~ 2.0'

▽ Water @ 10.0'

*Note: All depths measured from ground surface * NOT TO SCALE*

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): 998032.1 751123.1
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.
DRILLING METHOD: Hollow Stem Auger
WELL INSTALLATION STARTED: 12/03/93
WELL INSTALLATION COMPLETED: 12/03/93

GROUND SURFACE ELEVATION: 740.3
DATUM: NGVD 88
GEOLOGIST: E. Schacht
CHECKED BY: P.Feschbach-Meriney
CONSULTANT:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS																																																																
MACRO DESCRIPTION (from boring log)	DEPTH (ft.)																																																																						
				2.7	TPC	737.6	PROTECTIVE COVER Diameter: 4 inches Type: Square Box Riser Interval: 2.98 feet																																																																
				2.7	TR	737.6																																																																	
					TC																																																																		
				0.0	GS	740.3																																																																	
FL	0			1.3	TBS	739.0	RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: NA																																																																
				2.0	TSP	738.3																																																																	
				3.1	TSC	737.2	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 1 foot																																																																
WS				4.1	BSC	736.2																																																																	
	5.0	5		5.0	POW	735.3	SURFACE SEAL Type: CEMENT Interval: NA GROUT Type: CEMENT-BENTONITE Interval: 1.3 feet SEAL Type: BENTONITE Interval: 0.7 feet SANDPACK Type: #1 and #3 Interval: 3.0 feet																																																																
CS																																																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">WELL DEVELOPMENT DATA</th> <th colspan="4">WATER LEVELS</th> </tr> <tr> <th>Date</th> <th>Method</th> <th>Duration</th> <th>Rate</th> <th>Date</th> <th>Time</th> <th>Depth</th> <th>TR</th> </tr> </thead> <tbody> <tr> <td>1/8/94</td> <td>Bail & Pump</td> <td>1 Day</td> <td>1.5 L/minute</td> <td>1/8/94</td> <td>1420</td> <td>5.95 ft</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>1/8/94</td> <td>1440</td> <td>6.20 ft</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>1/8/94</td> <td>1500</td> <td>6.60 ft</td> <td></td> </tr> <tr> <td colspan="8">Final Measurements:</td> </tr> <tr> <td>pH</td> <td>Temperature (degrees C)</td> <td>Conductivity (micromhos/cm)</td> <td colspan="5">Turbidity (NTU)</td> </tr> <tr> <td>7.00</td> <td>4</td> <td>600</td> <td colspan="5">4.44</td> </tr> </tbody> </table>							WELL DEVELOPMENT DATA				WATER LEVELS				Date	Method	Duration	Rate	Date	Time	Depth	TR	1/8/94	Bail & Pump	1 Day	1.5 L/minute	1/8/94	1420	5.95 ft						1/8/94	1440	6.20 ft						1/8/94	1500	6.60 ft		Final Measurements:								pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)					7.00	4	600	4.44					
WELL DEVELOPMENT DATA				WATER LEVELS																																																																			
Date	Method	Duration	Rate	Date	Time	Depth	TR																																																																
1/8/94	Bail & Pump	1 Day	1.5 L/minute	1/8/94	1420	5.95 ft																																																																	
				1/8/94	1440	6.20 ft																																																																	
				1/8/94	1500	6.60 ft																																																																	
Final Measurements:																																																																							
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																																																				
7.00	4	600	4.44																																																																				
LEGEND		GRAVEL SAND SILT CLAY NO RECOVERY	SURFACE SEAL GROUT SEAL SANDPACK	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL																																																																			



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW25-1

COMPLETION REPORT OF WELL No. MW25-2

PROJECT: SEAD-25 & SEAD-26 RI/FS	GROUND SURFACE ELEVATION: 743.8
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541	DATUM: NGVD 88
WELL LOCATION (N/E): 998023.1 750973.4	GEOLOGIST: E. Schacht
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.	CHECKED BY: P.Feschbach-Meriney
DRILLING METHOD: Hollow Stem Auger	CONSULTANT:
WELL INSTALLATION STARTED: 11/07/93	
WELL INSTALLATION COMPLETED: 11/07/93	

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS																																				
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)																																									
				2.6	TPC	741.1																																				
				2.6	TR	741.1																																				
				0.0	GS	743.8																																				
TL	0	[Gravel]	[Well Riser]	1.2	TBS	742.6																																				
				2.0	TSP	741.8																																				
				3.4	TSC	740.4																																				
WS	5	[Clay]	[Well Screen]	7.4	BSC	736.4																																				
CS	8.5	[Sandpack]	[Well Point]	8.5	POW	735.3																																				
						<p>PROTECTIVE COVER Diameter: 4 inches Type: Square Box Riser Interval: 2.84 feet</p> <p>RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: NA</p> <p>SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 4 feet</p> <p>SURFACE SEAL Type: CEMENT Interval: NA</p> <p>GROUT Type: CEMENT-BENTONITE Interval: 1.2 feet</p> <p>SEAL Type: BENTONITE Interval: 0.8 feet</p> <p>SANDPACK Type: #1 and #3 Interval: 6.5 feet</p> <table border="0" style="width: 100%;"> <tr> <th colspan="2" style="text-align: left;">WELL DEVELOPMENT DATA</th> <th colspan="2" style="text-align: left;">WATER LEVELS</th> </tr> <tr> <td>Date: 11/11/93</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Time</td> <td style="text-align: center;">Depth, TR</td> </tr> <tr> <td>Method: Bail & Pump</td> <td style="text-align: center;">11/11/93</td> <td style="text-align: center;">1015</td> <td style="text-align: center;">5.12 ft</td> </tr> <tr> <td>Duration: 11 Days</td> <td style="text-align: center;">11/11/93</td> <td style="text-align: center;">1430</td> <td style="text-align: center;">10.24 ft</td> </tr> <tr> <td>Rate: 0.513 L/minute</td> <td style="text-align: center;">11/21/93</td> <td style="text-align: center;">1450</td> <td style="text-align: center;">4.68 ft</td> </tr> <tr> <td></td> <td style="text-align: center;">11/22/93</td> <td></td> <td style="text-align: center;">4.74 ft</td> </tr> </table> <p>Final Measurements:</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> <tr> <td>7.19</td> <td>12</td> <td>700</td> <td>1.23</td> </tr> </table>	WELL DEVELOPMENT DATA		WATER LEVELS		Date: 11/11/93	Date	Time	Depth, TR	Method: Bail & Pump	11/11/93	1015	5.12 ft	Duration: 11 Days	11/11/93	1430	10.24 ft	Rate: 0.513 L/minute	11/21/93	1450	4.68 ft		11/22/93		4.74 ft	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.19	12	700	1.23				
WELL DEVELOPMENT DATA		WATER LEVELS																																								
Date: 11/11/93	Date	Time	Depth, TR																																							
Method: Bail & Pump	11/11/93	1015	5.12 ft																																							
Duration: 11 Days	11/11/93	1430	10.24 ft																																							
Rate: 0.513 L/minute	11/21/93	1450	4.68 ft																																							
	11/22/93		4.74 ft																																							
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																							
7.19	12	700	1.23																																							
						<p>LEGEND</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">[Gravel]</td> <td>GRAVEL</td> <td style="width: 30%;">[TPC]</td> <td>TOP OF PROTECTIVE CASING</td> </tr> <tr> <td>[Surface Seal]</td> <td>SURFACE SEAL</td> <td>[TR]</td> <td>TOP OF WELL RISER</td> </tr> <tr> <td>[Grout]</td> <td>GROUT</td> <td>[GS]</td> <td>GROUND SURFACE</td> </tr> <tr> <td>[Seal]</td> <td>SEAL</td> <td>[TBS]</td> <td>TOP BENTONITE SEAL</td> </tr> <tr> <td>[Sandpack]</td> <td>SANDPACK</td> <td>[TSP]</td> <td>TOP OF SANDPACK</td> </tr> <tr> <td>[No Recovery]</td> <td>NO RECOVERY</td> <td>[TSC]</td> <td>TOP OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>[BSC]</td> <td>BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>[TD]</td> <td>TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td>[POW]</td> <td>POINT OF WELL</td> </tr> </table>	[Gravel]	GRAVEL	[TPC]	TOP OF PROTECTIVE CASING	[Surface Seal]	SURFACE SEAL	[TR]	TOP OF WELL RISER	[Grout]	GROUT	[GS]	GROUND SURFACE	[Seal]	SEAL	[TBS]	TOP BENTONITE SEAL	[Sandpack]	SANDPACK	[TSP]	TOP OF SANDPACK	[No Recovery]	NO RECOVERY	[TSC]	TOP OF SCREEN			[BSC]	BOTTOM OF SCREEN			[TD]	TOTAL DEPTH			[POW]	POINT OF WELL
[Gravel]	GRAVEL	[TPC]	TOP OF PROTECTIVE CASING																																							
[Surface Seal]	SURFACE SEAL	[TR]	TOP OF WELL RISER																																							
[Grout]	GROUT	[GS]	GROUND SURFACE																																							
[Seal]	SEAL	[TBS]	TOP BENTONITE SEAL																																							
[Sandpack]	SANDPACK	[TSP]	TOP OF SANDPACK																																							
[No Recovery]	NO RECOVERY	[TSC]	TOP OF SCREEN																																							
		[BSC]	BOTTOM OF SCREEN																																							
		[TD]	TOTAL DEPTH																																							
		[POW]	POINT OF WELL																																							



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW25-2

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
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.
DRILLING METHOD: Hollow Stem Auger
WELL INSTALLATION STARTED: 11/07/93
WELL INSTALLATION COMPLETED: 11/07/93

GROUND SURFACE ELEVATION: 743.3
DATUM: NGVD 88
GEOLOGIST: E. Schacht
CHECKED BY: P.Feschbach-Meriney
CONSULTANT:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
MACRO DESCRIPTION (from boring log)	DEPTH (ft.)						
				2.6	TPC	740.7	PROTECTIVE COVER Diameter: 4 inches Type: Square Box Riser Interval: 2.55 feet
				2.5	TR	740.7	
					TC		
				0.0	GS	743.3	
TL	0			1.5	TBS	741.8	RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: NA
				2.5	TSP	740.8	
WS				4.0	TSC	739.3	
CS	5			6.0	BSC	737.3	GROUT Type: CEMENT-BENTONITE Interval: 1.5 feet
	6.5			6.5	POW	736.8	
							SANDPACK Type: #1 and #3 Interval: 4.0 feet
				WELL DEVELOPMENT DATA		WATER LEVELS	
				Date:	11/9/93	Date	11/9/93
				Method:	Bail & Pump	Time	1345
				Duration:	2 Days	Depth, TR	4.80 ft
				Rate:	1.0 L/minute		1405
							0930
							1045
							1410
							7.70 ft
				Final Measurements:			
				pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
				7.42	12.2	500	1.73
LEGEND			GRAVEL	TPC	TOP OF PROTECTIVE CASING		
	SURFACE SEAL		SAND	TR	TOP OF WELL RISER		
	GROUT		SILT	GS	GROUND SURFACE		
	SEAL		CLAY	TBS	TOP BENTONITE SEAL		
	SANDPACK		NO RECOVERY	TSP	TOP OF SANDPACK		
				TSC	TOP OF SCREEN		
				BSC	BOTTOM OF SCREEN		
				TD	TOTAL DEPTH		
				POW	POINT OF WELL		



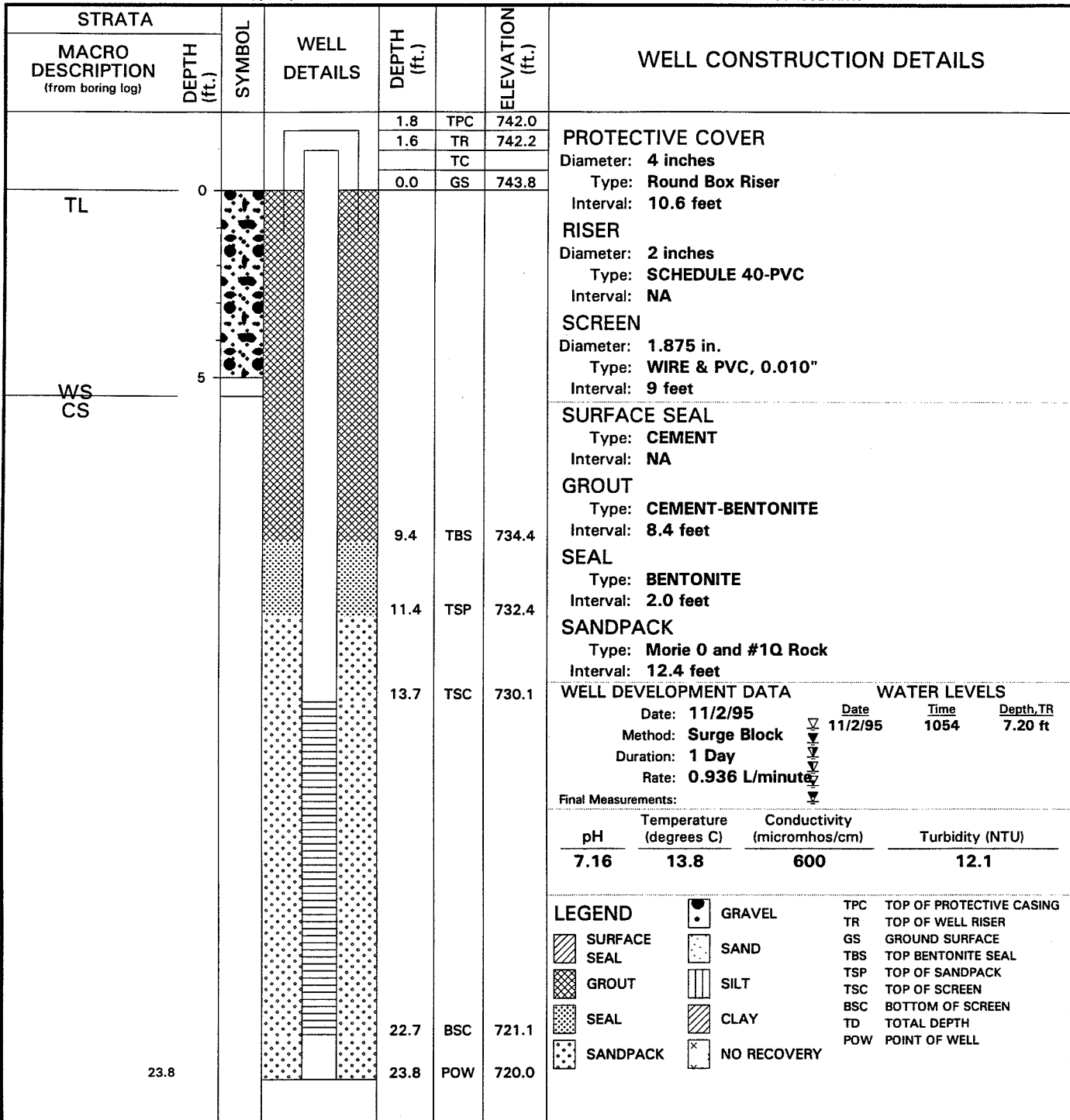
ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

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

COMPLETION REPORT OF WELL No. MW25-4D

PROJECT: SEAD-25 & SEAD-26 RI/FS	GROUND SURFACE ELEVATION: 743.8
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541	DATUM: NGVD 88
WELL LOCATION (N/E): 998022.1 750983.2	GEOLOGIST: F. O'Loughlin
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.	CHECKED BY: P.Feschbach-Meriney
DRILLING METHOD: Rock Coring	CONSULTANT:
WELL INSTALLATION STARTED: 10/31/95	
WELL INSTALLATION COMPLETED: 10/31/95	



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

**COMPLETION REPORT OF
WELL No. MW25-4D**

COMPLETION REPORT OF WELL No. MW25-5D

PROJECT: SEAD-25 & SEAD-26 RI/FS	GROUND SURFACE ELEVATION: 743.4
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541	DATUM: NGVD 88
WELL LOCATION (N/E): 998080.2 750937.0	GEOLOGIST: F. O'Loughlin
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.	CHECKED BY: P.Feschbach-Meriney
DRILLING METHOD: Rock Coring	CONSULTANT:
WELL INSTALLATION STARTED: 10/30/95	
WELL INSTALLATION COMPLETED: 10/30/95	

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS																																				
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)																																										
				1.8	TPC	741.7	PROTECTIVE COVER Diameter: 4 inches Type: Round Box Riser Interval: 8.7 feet																																				
				1.6	TR	741.8																																					
					TC																																						
				0.0	GS	743.4																																					
TL	0						RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 13.22 feet																																				
WS							SCREEN Diameter: 1.875 in. Type: WIRE & PVC, 0.010" slot Interval: 9 feet																																				
CS	5						SURFACE SEAL Type: CEMENT Interval: NA																																				
				7.7	TBS	735.7	GROUT Type: CEMENT-BENTONITE Interval: 6.7 feet																																				
				9.6	TSP	733.8	SEAL Type: BENTONITE Interval: 1.9 feet																																				
				11.6	TSC	731.8	SANDPACK Type: Morie 0 and #10 Rock Interval: 12.1 feet																																				
				20.6	BSC	722.8	WELL DEVELOPMENT DATA Date: 11/1/95 Method: Surge Block Duration: 2 Days Rate: 0.370 L/minute Final Measurements:																																				
				21.7	POW	721.7																																					
	21.7						WATER LEVELS <table border="1" style="font-size: small;"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>11/1/95</td> <td>1505</td> <td>6.35 ft</td> </tr> <tr> <td>11/2/95</td> <td>0835</td> <td>6.41 ft</td> </tr> </tbody> </table>	Date	Time	Depth, TR	11/1/95	1505	6.35 ft	11/2/95	0835	6.41 ft																											
Date	Time	Depth, TR																																									
11/1/95	1505	6.35 ft																																									
11/2/95	0835	6.41 ft																																									
							<table border="1" style="font-size: small;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td>6.96</td> <td>14.8</td> <td>700</td> <td>11.0</td> </tr> </tbody> </table>	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	6.96	14.8	700	11.0																												
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																								
6.96	14.8	700	11.0																																								
							LEGEND <table border="0" style="font-size: x-small;"> <tr> <td></td> <td>GRAVEL</td> <td>TPC</td> <td>TOP OF PROTECTIVE CASING</td> </tr> <tr> <td></td> <td>SURFACE SEAL</td> <td>TR</td> <td>TOP OF WELL RISER</td> </tr> <tr> <td></td> <td>GROUT</td> <td>GS</td> <td>GROUND SURFACE</td> </tr> <tr> <td></td> <td>SEAL</td> <td>TBS</td> <td>TOP BENTONITE SEAL</td> </tr> <tr> <td></td> <td>SANDPACK</td> <td>TSP</td> <td>TOP OF SANDPACK</td> </tr> <tr> <td></td> <td>SILT</td> <td>TSC</td> <td>TOP OF SCREEN</td> </tr> <tr> <td></td> <td>CLAY</td> <td>BSC</td> <td>BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td>NO RECOVERY</td> <td>TD</td> <td>TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td>POW</td> <td>POINT OF WELL</td> </tr> </table>		GRAVEL	TPC	TOP OF PROTECTIVE CASING		SURFACE SEAL	TR	TOP OF WELL RISER		GROUT	GS	GROUND SURFACE		SEAL	TBS	TOP BENTONITE SEAL		SANDPACK	TSP	TOP OF SANDPACK		SILT	TSC	TOP OF SCREEN		CLAY	BSC	BOTTOM OF SCREEN		NO RECOVERY	TD	TOTAL DEPTH			POW	POINT OF WELL
	GRAVEL	TPC	TOP OF PROTECTIVE CASING																																								
	SURFACE SEAL	TR	TOP OF WELL RISER																																								
	GROUT	GS	GROUND SURFACE																																								
	SEAL	TBS	TOP BENTONITE SEAL																																								
	SANDPACK	TSP	TOP OF SANDPACK																																								
	SILT	TSC	TOP OF SCREEN																																								
	CLAY	BSC	BOTTOM OF SCREEN																																								
	NO RECOVERY	TD	TOTAL DEPTH																																								
		POW	POINT OF WELL																																								



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW25-5D

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 WELL INSTALLATION COMPLETED: 09/26/95	GROUND SURFACE ELEVATION: 742.2 DATUM: NGVD 88 GEOLOGIST: F. O'Loughlin CHECKED BY: P.Feschbach-Meriney CONSULTANT:
---	---

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS																																													
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)																																																			
				2.3	TPC	739.9	PROTECTIVE COVER Diameter: 4 inches Type: Round Box Riser Interval: 4.0 feet																																													
				2.2	TR	740.1																																														
				0.0	TC																																															
				0.0	GS	742.2																																														
TL	0			2.0	TBS	740.2	RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 6.46 feet																																													
				3.3	TSP	738.9	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 6.8 feet																																													
				4.3	TSC	737.9	SURFACE SEAL Type: CEMENT Interval: NA																																													
							GROUT Type: CEMENT Interval: 1.5 feet																																													
WS	10						SEAL Type: BENTONITE Interval: 1.3 feet																																													
				11.1	BSC	731.1	SANDPACK Type: Morie 0 and Morie 000 Interval: 8.9 feet																																													
CS	12.2			12.2	POW	730.0	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">WELL DEVELOPMENT DATA</th> <th colspan="3" style="text-align: left;">WATER LEVELS</th> </tr> <tr> <th>Date:</th> <th>10/30/95</th> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>Method:</td> <td>Surge Block</td> <td>10/30/95</td> <td>1125</td> <td>6.06 ft</td> </tr> <tr> <td>Duration:</td> <td>1 Day</td> <td>10/30/95</td> <td>1251</td> <td>6.20 ft</td> </tr> <tr> <td>Rate:</td> <td>0.540 L/minute</td> <td>10/30/95</td> <td>1320</td> <td>8.24 ft</td> </tr> <tr> <td></td> <td></td> <td>10/30/95</td> <td>1341</td> <td>10.24 ft</td> </tr> <tr> <td colspan="5">Final Measurements:</td> </tr> <tr> <td>pH</td> <td>Temperature (degrees C)</td> <td>Conductivity (micromhos/cm)</td> <td colspan="2">Turbidity (NTU)</td> </tr> <tr> <td style="text-align: center;">7.18</td> <td style="text-align: center;">15</td> <td style="text-align: center;">790</td> <td colspan="2" style="text-align: center;">2.85</td> </tr> </tbody> </table>	WELL DEVELOPMENT DATA		WATER LEVELS			Date:	10/30/95	Date	Time	Depth, TR	Method:	Surge Block	10/30/95	1125	6.06 ft	Duration:	1 Day	10/30/95	1251	6.20 ft	Rate:	0.540 L/minute	10/30/95	1320	8.24 ft			10/30/95	1341	10.24 ft	Final Measurements:					pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)		7.18	15	790	2.85	
WELL DEVELOPMENT DATA		WATER LEVELS																																																		
Date:	10/30/95	Date	Time	Depth, TR																																																
Method:	Surge Block	10/30/95	1125	6.06 ft																																																
Duration:	1 Day	10/30/95	1251	6.20 ft																																																
Rate:	0.540 L/minute	10/30/95	1320	8.24 ft																																																
		10/30/95	1341	10.24 ft																																																
Final Measurements:																																																				
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																																	
7.18	15	790	2.85																																																	
		LEGEND				TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL																																														



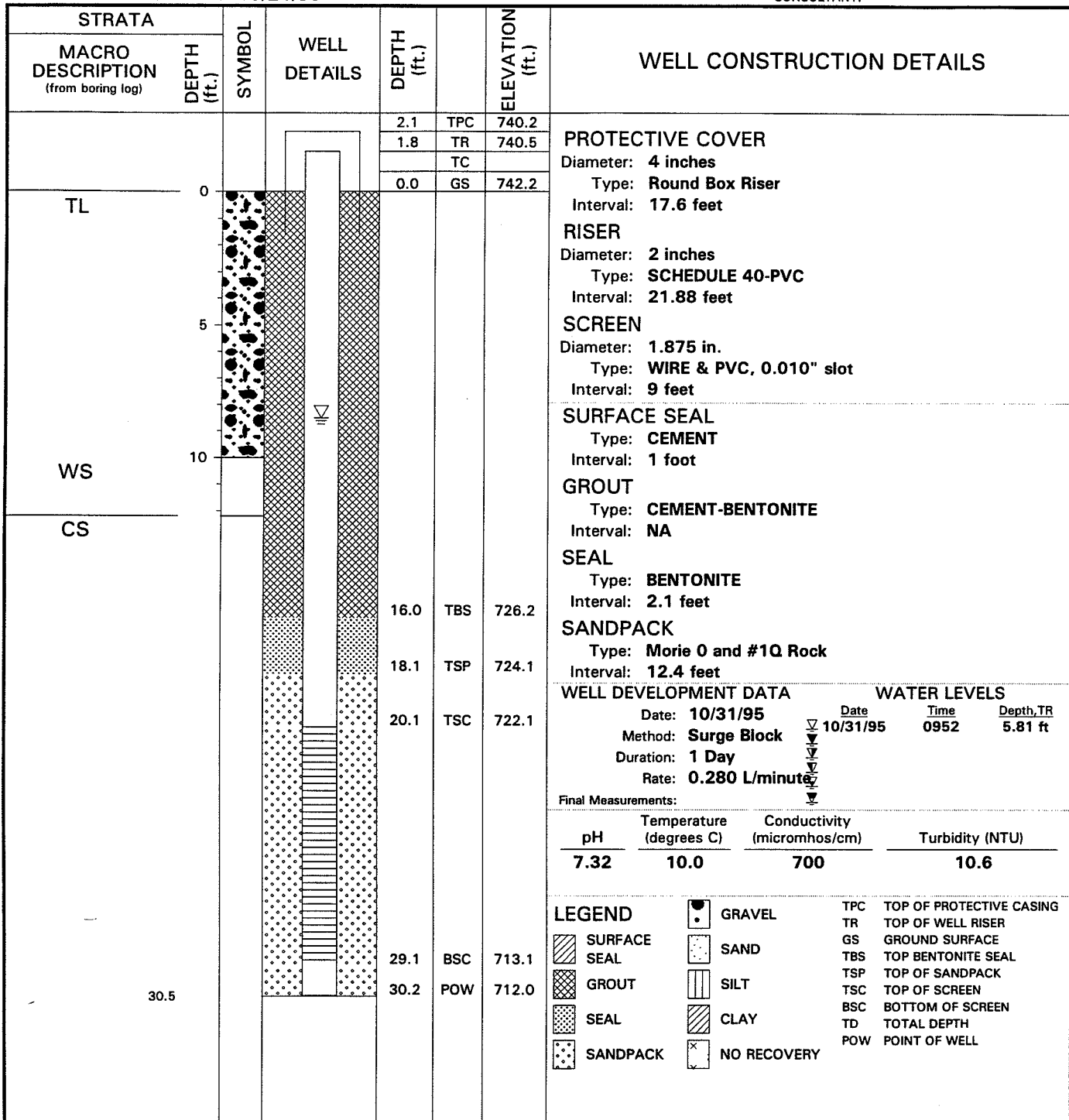
ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

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

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 DRILLING CONTRACTOR: Empire Soils Investigation, Inc. DRILLING METHOD: Rock Coring WELL INSTALLATION STARTED: 10/24/95 WELL INSTALLATION COMPLETED: 10/24/95	GROUND SURFACE ELEVATION: 742.2 DATUM: NGVD 88 GEOLOGIST: F. O'Loughlin CHECKED BY: P.Feschbach-Meriney CONSULTANT:
---	---



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW25-7D

COMPLETION REPORT OF WELL No. MW25-8

PROJECT: SEAD-25 & SEAD-26 RI/FS
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541
WELL LOCATION (N/E): 998076.8 750856.9
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: 741.4
DATUM: NGVD 88
GEOLOGIST: F. O'Loughlin
CHECKED BY: P.Feschbach-Meriney
CONSULTANT:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS																																					
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)																																											
				1.3	TPC	740.1	PROTECTIVE COVER Diameter: 4 inches Type: Round Box Riser Interval: 2.50 feet																																					
				1.1	TR	740.2																																						
					TC																																							
				0.0	GS	741.4																																						
TL	0			1.4	TBS	740.0	RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 4.34 feet																																					
				2.4	TSP	739.0																																						
WS				3.2	TSC	738.2	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 0.8 feet																																					
				4.0	BSC	737.4																																						
CS	4.5			4.5	POW	736.9	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																																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">WELL DEVELOPMENT DATA</th> <th colspan="3">WATER LEVELS</th> </tr> <tr> <th>Date</th> <th>10/22/95</th> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>Method:</td> <td>Surge Block</td> <td>10/20/95</td> <td>1624</td> <td>3.32 ft</td> </tr> <tr> <td>Duration:</td> <td>3 Days</td> <td>10/22/95</td> <td>1700</td> <td>4.80 ft</td> </tr> <tr> <td>Rate:</td> <td>0.900 L/minute</td> <td>10/22/95</td> <td>1004</td> <td>1.26 ft</td> </tr> <tr> <td></td> <td></td> <td>10/22/95</td> <td>1056</td> <td>1.32 ft</td> </tr> </tbody> </table> <p>Final Measurements:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td>7.35</td> <td>14.5</td> <td>350</td> <td>7.3</td> </tr> </tbody> </table>							WELL DEVELOPMENT DATA		WATER LEVELS			Date	10/22/95	Date	Time	Depth, TR	Method:	Surge Block	10/20/95	1624	3.32 ft	Duration:	3 Days	10/22/95	1700	4.80 ft	Rate:	0.900 L/minute	10/22/95	1004	1.26 ft			10/22/95	1056	1.32 ft	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.35	14.5	350	7.3
WELL DEVELOPMENT DATA		WATER LEVELS																																										
Date	10/22/95	Date	Time	Depth, TR																																								
Method:	Surge Block	10/20/95	1624	3.32 ft																																								
Duration:	3 Days	10/22/95	1700	4.80 ft																																								
Rate:	0.900 L/minute	10/22/95	1004	1.26 ft																																								
		10/22/95	1056	1.32 ft																																								
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																									
7.35	14.5	350	7.3																																									
LEGEND <table style="width: 100%;"> <tr> <td></td> <td>GRAVEL</td> <td>TPC</td> <td>TOP OF PROTECTIVE CASING</td> </tr> <tr> <td></td> <td>SURFACE SEAL</td> <td>TR</td> <td>TOP OF WELL RISER</td> </tr> <tr> <td></td> <td>GROUT</td> <td>GS</td> <td>GROUND SURFACE</td> </tr> <tr> <td></td> <td>SEAL</td> <td>TBS</td> <td>TOP BENTONITE SEAL</td> </tr> <tr> <td></td> <td>SANDPACK</td> <td>TSP</td> <td>TOP OF SANDPACK</td> </tr> <tr> <td></td> <td>SILT</td> <td>TSC</td> <td>TOP OF SCREEN</td> </tr> <tr> <td></td> <td>CLAY</td> <td>BSC</td> <td>BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td>NO RECOVERY</td> <td>TD</td> <td>TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td>POW</td> <td>POINT OF WELL</td> </tr> </table>								GRAVEL	TPC	TOP OF PROTECTIVE CASING		SURFACE SEAL	TR	TOP OF WELL RISER		GROUT	GS	GROUND SURFACE		SEAL	TBS	TOP BENTONITE SEAL		SANDPACK	TSP	TOP OF SANDPACK		SILT	TSC	TOP OF SCREEN		CLAY	BSC	BOTTOM OF SCREEN		NO RECOVERY	TD	TOTAL DEPTH			POW	POINT OF WELL		
	GRAVEL	TPC	TOP OF PROTECTIVE CASING																																									
	SURFACE SEAL	TR	TOP OF WELL RISER																																									
	GROUT	GS	GROUND SURFACE																																									
	SEAL	TBS	TOP BENTONITE SEAL																																									
	SANDPACK	TSP	TOP OF SANDPACK																																									
	SILT	TSC	TOP OF SCREEN																																									
	CLAY	BSC	BOTTOM OF SCREEN																																									
	NO RECOVERY	TD	TOTAL DEPTH																																									
		POW	POINT OF WELL																																									



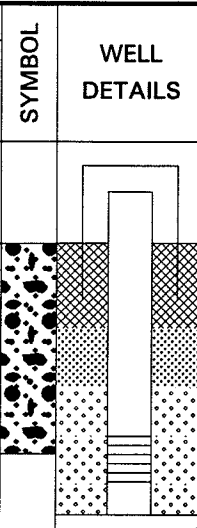
ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW25-8

COMPLETION REPORT OF WELL No. MW25-9

PROJECT: SEAD-25 & SEAD-26 RI/FS	GROUND SURFACE ELEVATION: 741.3
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541	DATUM: NGVD 88
WELL LOCATION (N/E): 998005.3 750898.1	GEOLOGIST: F. O'Loughlin
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.	CHECKED BY: P.Feschbach-Meriney
DRILLING METHOD: Hollow Stem Auger	CONSULTANT:
WELL INSTALLATION STARTED: 09/26/95	
WELL INSTALLATION COMPLETED: 09/26/95	

STRATA	DEPTH (ft.)	SYMBOL	WELL DETAILS	DEPTH (ft.)	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
				1.3	TPC	740.0
				1.1	TR	740.2
					TC	
				0.0	GS	741.3
TL	0			1.4	TBS	739.9
				2.4	TSP	738.9
				3.2	TSC	738.1
WS				4.0	BSC	737.3
	4.8			4.5	POW	736.8
CS						

PROTECTIVE COVER	
Diameter:	4 inches
Type:	Round Box Riser
Interval:	2.57 feet
RISER	
Diameter:	2 inches
Type:	SCHEDULE 40-PVC
Interval:	4.27 feet
SCREEN	
Diameter:	2 inches
Type:	SCH 40-PVC, 0.010" slot
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

WELL DEVELOPMENT DATA	WATER LEVELS
Date: 10/20/95	Date Time Depth, TR
Method: Surge Block	▽ 10/20/95 1610 3.10 ft
Duration: 3 Days	▽ 10/22/95 0948 1.27 ft
Rate: 0.320 L/minute	▽ 10/22/95 1040 2.87 ft
	▽ 10/22/95 1150 3.50 ft
Final Measurements:	▽

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
7.18	14.0	490	4.44

LEGEND	GRAVEL SURFACE SEAL GROUT SEAL SANDPACK	SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL
---------------	---	-------------------------------------	--



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW25-9

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): 997965.0 751000.0 DRILLING CONTRACTOR: Empire Soils Investigation, Inc. DRILLING METHOD: Hollow Stem Auger WELL INSTALLATION STARTED: 09/27/95 WELL INSTALLATION COMPLETED: 09/27/95	GROUND SURFACE ELEVATION: 741.8 DATUM: NGVD 88 GEOLOGIST: F. O'Loughlin CHECKED BY: P.Feschbach-Meriney CONSULTANT:
---	---

STRATA	DEPTH (ft.)	SYMBOL	WELL DETAILS	DEPTH (ft.)	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS																																												
				1.4	TPC 740.4	PROTECTIVE COVER Diameter: 4 inches Type: Round Box Riser Interval: 2.29 feet																																												
				1.2	TR 740.6																																													
				0.0	GS 741.8																																													
TL	0																																																	
				1.3	TBS 740.5	RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 4.41 feet																																												
				2.4	TSP 739.4																																													
				3.2	TSC 738.6																																													
				5.2	BSC 736.6	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 2.0 feet																																												
WS	5			5.6	POW 736.2																																													
CS	5.6					SURFACE SEAL Type: CEMENT Interval: 0.8 feet GROUT Type: NA Interval: NA SEAL Type: BENTONITE Interval: 1.1 feet SANDPACK Type: Morie 0 and Morie 000 Interval: 2.8 feet																																												
<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">WELL DEVELOPMENT DATA</th> <th colspan="3" style="text-align: left;">WATER LEVELS</th> </tr> <tr> <td>Date: 10/25/95</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Time</td> <td style="text-align: center;">Depth, TR</td> </tr> <tr> <td>Method: Surge Block</td> <td style="text-align: center;">▽ 10/22/95</td> <td style="text-align: center;">1310</td> <td style="text-align: center;">1.67 ft</td> </tr> <tr> <td>Duration: 4 Days</td> <td style="text-align: center;">▽ 10/22/95</td> <td style="text-align: center;">1759</td> <td style="text-align: center;">4.30 ft</td> </tr> <tr> <td>Rate: 0.090 L/minute</td> <td style="text-align: center;">▽ 10/23/95</td> <td style="text-align: center;">1643</td> <td style="text-align: center;">2.38 ft</td> </tr> <tr> <td></td> <td style="text-align: center;">▽ 10/24/95</td> <td style="text-align: center;">1315</td> <td style="text-align: center;">2.86 ft</td> </tr> <tr> <td colspan="4">Final Measurements:</td> </tr> <tr> <td style="text-align: center;">pH</td> <td style="text-align: center;">Temperature (degrees C)</td> <td style="text-align: center;">Conductivity (micromhos/cm)</td> <td style="text-align: center;">Turbidity (NTU)</td> </tr> <tr> <td style="text-align: center;">7.30</td> <td style="text-align: center;">14.9</td> <td style="text-align: center;">425</td> <td style="text-align: center;">5.46</td> </tr> </table>						WELL DEVELOPMENT DATA	WATER LEVELS			Date: 10/25/95	Date	Time	Depth, TR	Method: Surge Block	▽ 10/22/95	1310	1.67 ft	Duration: 4 Days	▽ 10/22/95	1759	4.30 ft	Rate: 0.090 L/minute	▽ 10/23/95	1643	2.38 ft		▽ 10/24/95	1315	2.86 ft	Final Measurements:				pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.30	14.9	425	5.46									
WELL DEVELOPMENT DATA	WATER LEVELS																																																	
Date: 10/25/95	Date	Time	Depth, TR																																															
Method: Surge Block	▽ 10/22/95	1310	1.67 ft																																															
Duration: 4 Days	▽ 10/22/95	1759	4.30 ft																																															
Rate: 0.090 L/minute	▽ 10/23/95	1643	2.38 ft																																															
	▽ 10/24/95	1315	2.86 ft																																															
Final Measurements:																																																		
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																															
7.30	14.9	425	5.46																																															
<table border="0" style="width: 100%;"> <tr> <td colspan="2">LEGEND</td> <td style="width: 20px;"></td> <td>TPC</td> <td>TOP OF PROTECTIVE CASING</td> </tr> <tr> <td style="text-align: center;"></td> <td>GRAVEL</td> <td></td> <td>TR</td> <td>TOP OF WELL RISER</td> </tr> <tr> <td style="text-align: center;"></td> <td>SURFACE SEAL</td> <td style="text-align: center;"></td> <td>GS</td> <td>GROUND SURFACE</td> </tr> <tr> <td style="text-align: center;"></td> <td>GROUT</td> <td style="text-align: center;"></td> <td>TBS</td> <td>TOP BENTONITE SEAL</td> </tr> <tr> <td style="text-align: center;"></td> <td>SEAL</td> <td style="text-align: center;"></td> <td>TSP</td> <td>TOP OF SANDPACK</td> </tr> <tr> <td style="text-align: center;"></td> <td>SANDPACK</td> <td style="text-align: center;"></td> <td>TSC</td> <td>TOP OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td></td> <td>BSC</td> <td>BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td></td> <td>TD</td> <td>TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td></td> <td>POW</td> <td>POINT OF WELL</td> </tr> </table>						LEGEND			TPC	TOP OF PROTECTIVE CASING		GRAVEL		TR	TOP OF WELL RISER		SURFACE SEAL		GS	GROUND SURFACE		GROUT		TBS	TOP BENTONITE SEAL		SEAL		TSP	TOP OF SANDPACK		SANDPACK		TSC	TOP OF SCREEN				BSC	BOTTOM OF SCREEN				TD	TOTAL DEPTH				POW	POINT OF WELL
LEGEND			TPC	TOP OF PROTECTIVE CASING																																														
	GRAVEL		TR	TOP OF WELL RISER																																														
	SURFACE SEAL		GS	GROUND SURFACE																																														
	GROUT		TBS	TOP BENTONITE SEAL																																														
	SEAL		TSP	TOP OF SANDPACK																																														
	SANDPACK		TSC	TOP OF SCREEN																																														
			BSC	BOTTOM OF SCREEN																																														
			TD	TOTAL DEPTH																																														
			POW	POINT OF WELL																																														



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

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

COMPLETION REPORT OF WELL No. MW25-11

PROJECT: SEAD-25 & SEAD-26 RI/FS
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541
WELL LOCATION (N/E): 997865.7 750956.7
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.
DRILLING METHOD: Hollow Stem Auger
WELL INSTALLATION STARTED: 10/11/95
WELL INSTALLATION COMPLETED: 10/11/95

GROUND SURFACE ELEVATION: 738.7
DATUM: NGVD 88
GEOLOGIST: F. O'Loughlin
CHECKED BY: P.Feschbach-Meriney
CONSULTANT:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS	
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)							
				1.6	TPC	737.1	PROTECTIVE COVER Diameter: 4 inches Type: Round Box Riser Interval: 4.53 feet	
				1.5	TR	737.2		
					TC			
				0.0	GS	738.7		
TL	0			1.4	TBS	737.3	RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 5.35 feet	
				2.7	TSP	736.0	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 1.5 feet	
				3.8	TSC	734.9		
WS	5			5.3	BSC	733.4	SURFACE SEAL Type: CEMENT Interval: 1.4 feet	
CS	5.7			5.7	POW	733.0	GROUT Type: NA 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, TR
				Method: Surge Block		10/23/95	1620	4.18 ft
				Duration: 3 Days		10/24/95	1335	2.92 ft
				Rate: 1.020 L/minute		10/24/95	1650	3.00 ft
						10/25/95	0830	3.29 ft
				Final Measurements:				
				pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	
				7.11	14	920	25.1	
LEGEND			GRAVEL	TPC	TOP OF PROTECTIVE CASING			
			SURFACE SEAL	TR	TOP OF WELL RISER			
			GROUT	GS	GROUND SURFACE			
			SEAL	TBS	TOP BENTONITE SEAL			
			SANDPACK	TSP	TOP OF SANDPACK			
			SILT	TSC	TOP OF SCREEN			
			CLAY	BSC	BOTTOM OF SCREEN			
			NO RECOVERY	TD	TOTAL DEPTH			
				POW	POINT OF WELL			



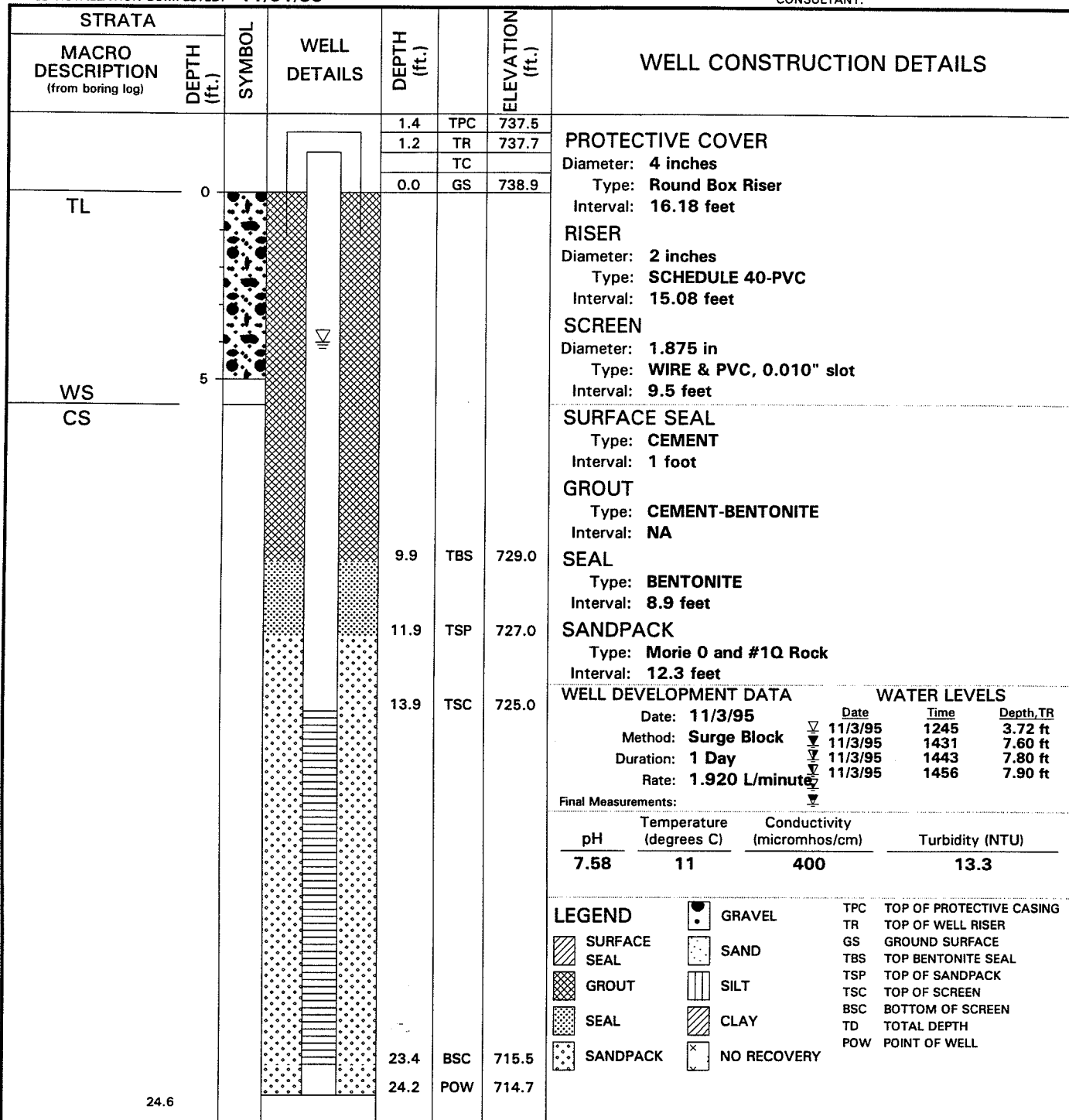
ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

**COMPLETION REPORT OF
WELL No. MW25-11**

COMPLETION REPORT OF WELL No. MW25-12D

PROJECT: SEAD-25 & SEAD-26 RI/FS	GROUND SURFACE ELEVATION: 738.9
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541	DATUM: NGVD 88
WELL LOCATION (N/E): 997866.1 750967.3	GEOLOGIST: F. O'Loughlin
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.	CHECKED BY: P.Feschbach-Meriney
DRILLING METHOD: Rock Coring	CONSULTANT:
WELL INSTALLATION STARTED: 11/01/95	
WELL INSTALLATION COMPLETED: 11/01/95	



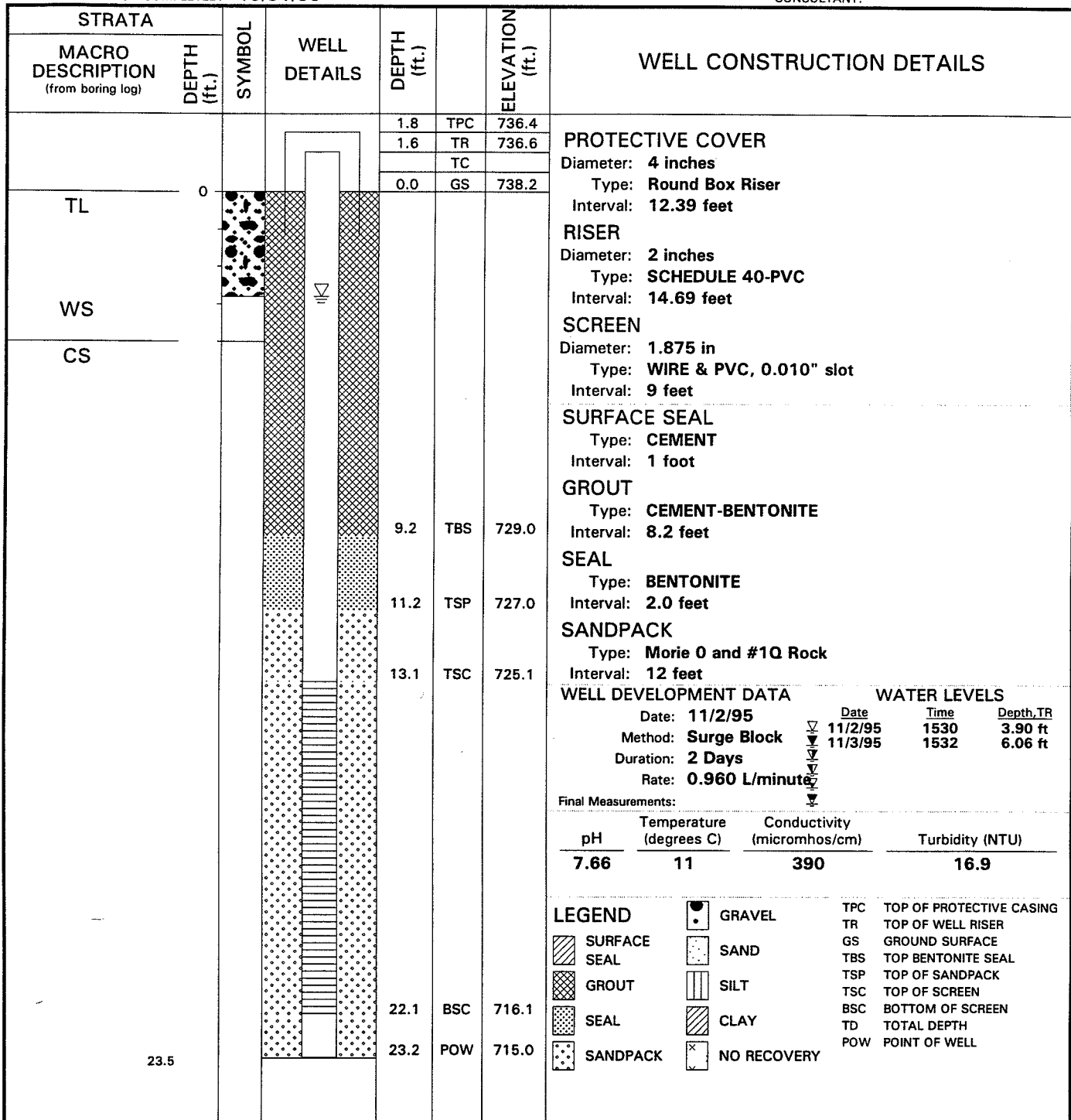
COMPLETION REPORT OF WELL No. MW25-13

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. DRILLING METHOD: Hollow Stem Auger WELL INSTALLATION STARTED: 10/11/95 WELL INSTALLATION COMPLETED: 10/11/95	GROUND SURFACE ELEVATION: 737.9 DATUM: NGVD 88 GEOLOGIST: F. O'Loughlin CHECKED BY: P.Feschbach-Meriney CONSULTANT:
---	---

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)						
	0			1.8	TPC	736.2	PROTECTIVE COVER Diameter: 4 inches Type: Round Box Riser Interval: 2.76 feet
				1.7	TR	736.3	
				TC			
				0.0	GS	737.9	
TL				1.0	TBS	736.9	RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 4.38 feet
				2.1	TSP	735.8	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 0.8 feet
				2.7	TSC	735.2	
WS				3.5	BSC	734.4	SURFACE SEAL Type: CEMENT Interval: 1.4 feet
	4.0			4.0	POW	733.9	
CS							GROUT Type: NA Interval: NA
							SEAL Type: BENTONITE Interval: 1.1 feet
							SANDPACK Type: Morie 0 and Morie 000 Interval: 1.9 feet
				WELL DEVELOPMENT DATA		WATER LEVELS	
				Date:	10/25/95	Date	10/24/95
				Method:	Surge Block	Time	1035
				Duration:	9 Days	Depth, TR	6.78 ft
				Rate:	0.050 L/minute	10/25/95	1202
						10/30/95	1040
						10/31/95	1610
				Final Measurements:		11/2/95	1308
							5.73 ft
		pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)		
		7.10	14.0	1000	9.66		
LEGEND			GRAVEL	TPC	TOP OF PROTECTIVE CASING		
			SURFACE SEAL	TR	TOP OF WELL RISER		
			GROUT	GS	GROUND SURFACE		
			SAND	TBS	TOP BENTONITE SEAL		
			SILT	TSP	TOP OF SANDPACK		
			SEAL	TSC	TOP OF SCREEN		
			CLAY	BSC	BOTTOM OF SCREEN		
			SANDPACK	TD	TOTAL DEPTH		
			NO RECOVERY	POW	POINT OF WELL		

COMPLETION REPORT OF WELL No. MW25-14D

PROJECT: SEAD-25 & SEAD-26 RI/FS	GROUND SURFACE ELEVATION: 738.2
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541	DATUM: NGVD 88
WELL LOCATION (N/E): 997866.5 750876.2	GEOLOGIST: F. O'Loughlin
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.	CHECKED BY: P.Feschbach-Meriney
DRILLING METHOD: Rock Coring	CONSULTANT:
WELL INSTALLATION STARTED: 10/31/95	
WELL INSTALLATION COMPLETED: 10/31/95	



- LEGEND**
- | | | | | | |
|--|--------------|--|-------------|-----|--------------------------|
| | SURFACE SEAL | | GRAVEL | TPC | TOP OF PROTECTIVE CASING |
| | GROUT | | SAND | TR | TOP OF WELL RISER |
| | SEAL | | SILT | GS | GROUND SURFACE |
| | SANDPACK | | CLAY | TBS | TOP BENTONITE SEAL |
| | | | NO RECOVERY | TSP | TOP OF SANDPACK |
| | | | | TSC | TOP OF SCREEN |
| | | | | BSC | BOTTOM OF SCREEN |
| | | | | TD | TOTAL DEPTH |
| | | | | POW | POINT OF WELL |



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

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

COMPLETION REPORT OF WELL No. MW25-15

PROJECT: **SEAD-25 & SEAD-26 RI/FS**
 PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
 WELL LOCATION (N/E): **997974.2 750764.4**
 DRILLING CONTRACTOR: **Empire Soils Investigation, Inc.**
 DRILLING METHOD: **Hollow Stem Auger**
 WELL INSTALLATION STARTED: **10/10/95**
 WELL INSTALLATION COMPLETED: **10/10/95**

GROUND SURFACE ELEVATION: **739.6**
 DATUM: **NGVD 88**
 GEOLOGIST: **F. O'Loughlin**
 CHECKED BY: **P.Feschbach-Meriney**
 CONSULTANT:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
MACRO DESCRIPTION (from boring log)	DEPTH (ft.)						
				1.6	TPC	738.0	PROTECTIVE COVER Diameter: 4 inches Type: Round Box Riser Interval: 3.22 feet
				1.4	TR	738.2	
					TC		
				0.0	GS	739.6	
TL	0			1.6	TBS	738.0	RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 5.29 feet
				2.9	TSP	736.7	
WS	5			3.9	TSC	735.7	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 1.5 feet
				5.4	BSC	734.2	
	6.2			5.8	POW	733.8	SURFACE SEAL Type: CEMENT Interval: 1 foot
CS							
							GROUT Type: NA Interval: NA
							SEAL Type: BENTONITE Interval: 1.3 feet
							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	10/24/95	1520	4.57 ft
				Duration: 10 Days	10/25/95	1300	3.20 ft
				Rate: 0.050 L/minute	10/30/95	1018	4.36 ft
					10/31/95	1520	5.00 ft
				Final Measurements:	11/1/95	1007	4.57 ft
					11/2/95	1030	4.66 ft
				pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
				6.93	15.0	450	8.38
LEGEND		GRAVEL SAND SILT CLAY NO RECOVERY		SURFACE SEAL GROUT SEAL SANDPACK		TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL	



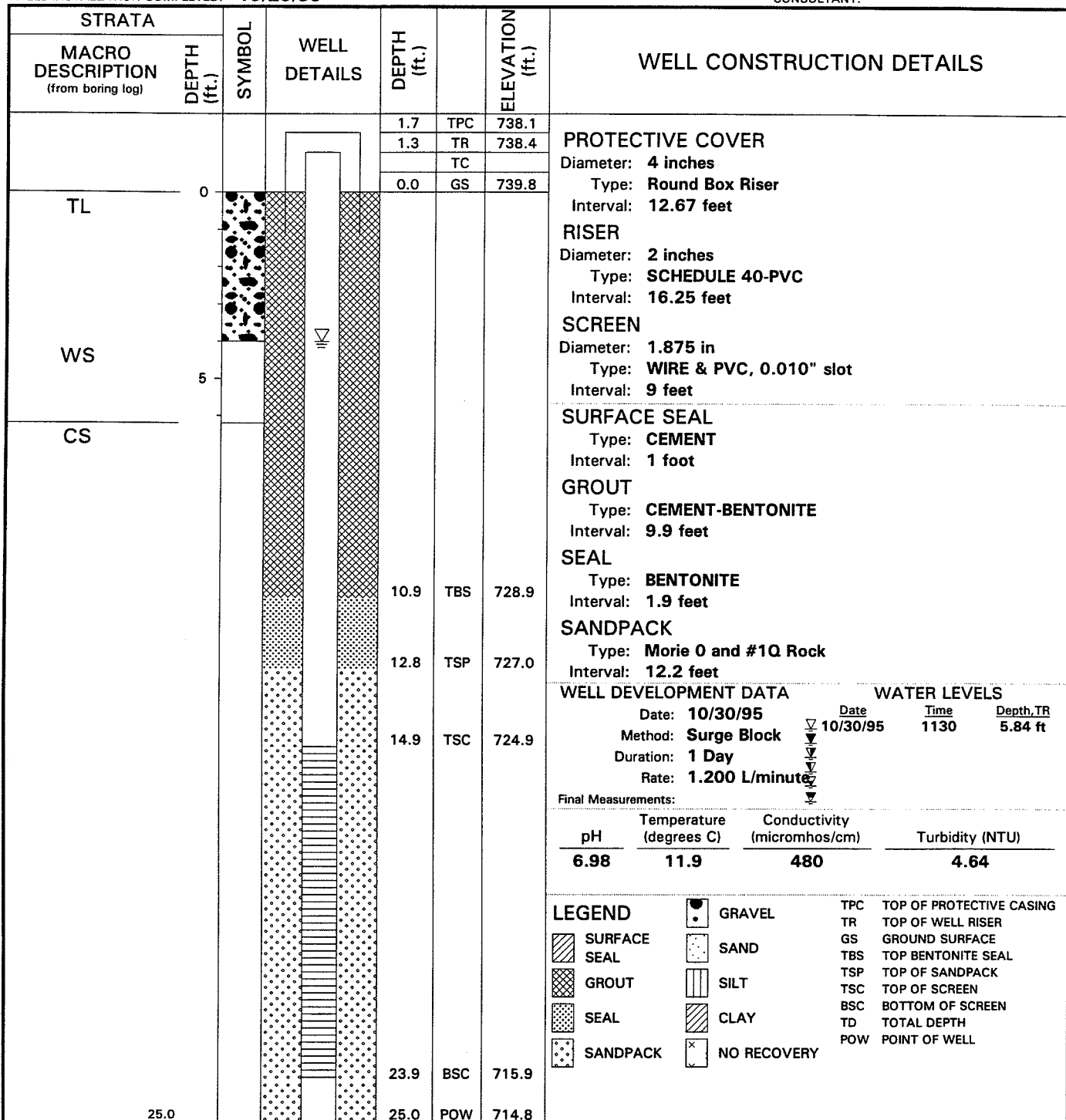
PARSONS ENGINEERING-SCIENCE, INC.

Seneca Army Depot
 Romulus, New York

COMPLETION REPORT OF WELL No. MW25-15

COMPLETION REPORT OF WELL No. MW25-16D

PROJECT: SEAD-25 & SEAD-26 RI/FS	GROUND SURFACE ELEVATION: 739.8
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541	DATUM: NGVD 88
WELL LOCATION (N/E): 997975.4 750773.2	GEOLOGIST: F. O'Loughlin
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.	CHECKED BY: P.Feschbach-Meriney
DRILLING METHOD: Rock Coring	CONSULTANT:
WELL INSTALLATION STARTED: 10/25/95	
WELL INSTALLATION COMPLETED: 10/25/95	



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW25-16D

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): 998187.6 750963.0 DRILLING CONTRACTOR: Empire Soils Investigation, Inc. DRILLING METHOD: Hollow Stem Auger WELL INSTALLATION STARTED: 10/16/95 WELL INSTALLATION COMPLETED: 10/16/95	GROUND SURFACE ELEVATION: 742.2 DATUM: NGVD 88 GEOLOGIST: F. O'Loughlin CHECKED BY: P.Feschbach-Meriney CONSULTANT:
---	---

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)					
				1.7	TPC	740.5
				1.7	TR	740.6
				0.0	TC	
				0.0	GS	742.2
TL	0			2.0	TBS	740.2
				3.6	TSP	738.6
				4.6	TSC	737.6
	5			9.1	BSC	733.1
WS				9.9	POW	732.3
	9.9					
CS						

PROTECTIVE COVER	
Diameter:	4 inches
Type:	Round Box Riser
Interval:	5.25 feet
RISER	
Diameter:	2 inches
Type:	SCHEDULE 40-PVC
Interval:	6.28 feet
SCREEN	
Diameter:	2 inches
Type:	SCH 40-PVC, 0.010" slot
Interval:	4.5 feet
SURFACE SEAL	
Type:	CEMENT
Interval:	NA
GROUT	
Type:	NA
Interval:	NA
SEAL	
Type:	BENTONITE
Interval:	1.6 feet
SANDPACK	
Type:	Morie 0 and #10 Rock
Interval:	6.3 feet

WELL DEVELOPMENT DATA	WATER LEVELS
Date: 10/31/95	Date: 10/31/95 Time: 1031 Depth, TR: 5.70 ft
Method: Surge Block	▼ 10/31/95 1415 5.07 ft
Duration: 1 Day	▼
Rate: 0.780 L/minute	▼
Final Measurements:	▼

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
7.12	13.0	550	4.16

LEGEND	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL
SURFACE SEAL GROUT SEAL SANDPACK		



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

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

COMPLETION REPORT OF WELL No. MW25-18

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**
 WELL INSTALLATION COMPLETED: **10/16/95**

GROUND SURFACE ELEVATION: **743.1**
 DATUM: **NGVD 88**
 GEOLOGIST: **F. O'Loughlin**
 CHECKED BY: **P.Feschbach-Meriney**
 CONSULTANT:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS																																				
MACRO DESCRIPTION (from boring log)	DEPTH (ft.)																																										
				1.6	TPC	741.4	PROTECTIVE COVER Diameter: 4 inches Type: Round Box Riser Interval: 5.02 feet																																				
				1.3	TR	741.7																																					
					TC																																						
				0.0	GS	743.1																																					
TL	0			1.9	TBS	741.2	RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 5.74 feet																																				
				3.4	TSP	739.7	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 4.5 feet																																				
				4.4	TSC	738.7																																					
	5						SURFACE SEAL Type: CEMENT Interval: NA																																				
							GROUT Type: NA Interval: NA																																				
WS				8.9	BSC	734.2	SEAL Type: BENTONITE Interval: 1.5 feet																																				
				9.7	POW	733.4	SANDPACK Type: Morie 0 and #10 Rock Interval: 6.3 feet																																				
	10.0																																										
CS	10																																										
<table border="1"> <thead> <tr> <th colspan="3">WELL DEVELOPMENT DATA</th> <th colspan="3">WATER LEVELS</th> </tr> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>10/30/95</td> <td>1518</td> <td>5.93 ft</td> <td>10/30/95</td> <td>0921</td> <td>5.98 ft</td> </tr> <tr> <td>Method: Surge Block</td> <td></td> <td></td> <td>11/1/95</td> <td>0900</td> <td>6.04 ft</td> </tr> <tr> <td>Duration: 4 Days</td> <td></td> <td></td> <td>11/2/95</td> <td>0825</td> <td>5.95 ft</td> </tr> <tr> <td>Rate: 0.090 L/minute</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							WELL DEVELOPMENT DATA			WATER LEVELS			Date	Time	Depth, TR	Date	Time	Depth, TR	10/30/95	1518	5.93 ft	10/30/95	0921	5.98 ft	Method: Surge Block			11/1/95	0900	6.04 ft	Duration: 4 Days			11/2/95	0825	5.95 ft	Rate: 0.090 L/minute						
WELL DEVELOPMENT DATA			WATER LEVELS																																								
Date	Time	Depth, TR	Date	Time	Depth, TR																																						
10/30/95	1518	5.93 ft	10/30/95	0921	5.98 ft																																						
Method: Surge Block			11/1/95	0900	6.04 ft																																						
Duration: 4 Days			11/2/95	0825	5.95 ft																																						
Rate: 0.090 L/minute																																											
<table border="1"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td>7.00</td> <td>14.5</td> <td>1480</td> <td>8.57</td> </tr> </tbody> </table>							pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.00	14.5	1480	8.57																													
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																								
7.00	14.5	1480	8.57																																								
LEGEND <table border="0"> <tr> <td></td> <td>GRAVEL</td> <td>TPC</td> <td>TOP OF PROTECTIVE CASING</td> </tr> <tr> <td></td> <td>SURFACE SEAL</td> <td>TR</td> <td>TOP OF WELL RISER</td> </tr> <tr> <td></td> <td>GROUT</td> <td>GS</td> <td>GROUND SURFACE</td> </tr> <tr> <td></td> <td>SEAL</td> <td>TBS</td> <td>TOP BENTONITE SEAL</td> </tr> <tr> <td></td> <td>SANDPACK</td> <td>TSP</td> <td>TOP OF SANDPACK</td> </tr> <tr> <td></td> <td>SILT</td> <td>TSC</td> <td>TOP OF SCREEN</td> </tr> <tr> <td></td> <td>CLAY</td> <td>BSC</td> <td>BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td>NO RECOVERY</td> <td>TD</td> <td>TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td>POW</td> <td>POINT OF WELL</td> </tr> </table>								GRAVEL	TPC	TOP OF PROTECTIVE CASING		SURFACE SEAL	TR	TOP OF WELL RISER		GROUT	GS	GROUND SURFACE		SEAL	TBS	TOP BENTONITE SEAL		SANDPACK	TSP	TOP OF SANDPACK		SILT	TSC	TOP OF SCREEN		CLAY	BSC	BOTTOM OF SCREEN		NO RECOVERY	TD	TOTAL DEPTH			POW	POINT OF WELL	
	GRAVEL	TPC	TOP OF PROTECTIVE CASING																																								
	SURFACE SEAL	TR	TOP OF WELL RISER																																								
	GROUT	GS	GROUND SURFACE																																								
	SEAL	TBS	TOP BENTONITE SEAL																																								
	SANDPACK	TSP	TOP OF SANDPACK																																								
	SILT	TSC	TOP OF SCREEN																																								
	CLAY	BSC	BOTTOM OF SCREEN																																								
	NO RECOVERY	TD	TOTAL DEPTH																																								
		POW	POINT OF WELL																																								



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW25-18

COMPLETION REPORT OF WELL No. MW25-19

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. DRILLING METHOD: Hollow Stem Auger WELL INSTALLATION STARTED: 10/07/95 WELL INSTALLATION COMPLETED: 10/07/95	GROUND SURFACE ELEVATION: 740.1 DATUM: NGVD 88 GEOLOGIST: F. O'Loughlin CHECKED BY: P.Feschbach-Meriney CONSULTANT:
---	---

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS																																
MACRO DESCRIPTION (from boring log)	DEPTH (ft.)																																						
				1.9	TPC	738.1	PROTECTIVE COVER Diameter: 4 inches Type: Round Box Riser Interval: 3.95 feet RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 7.15 feet SCREEN Diameter: 1.875 in. Type: WIRE & PVC, 0.010" slot Interval: 4.5 feet SURFACE SEAL Type: CEMENT Interval: NA GROUT Type: NA Interval: NA SEAL Type: BENTONITE Interval: 2.0 feet SANDPACK Type: Morie 0 and Morie 000 Interval: 6.2 feet																																
				1.9	TR	738.2																																	
					TC																																		
				0.0	GS	740.1																																	
TL	0			2.0	TBS	738.1																																	
				4.0	TSP	736.1																																	
	5			5.3	TSC	734.8																																	
WS	10.2			9.8	BSC	730.3																																	
	10			10.2	POW	729.9																																	
CS							WELL DEVELOPMENT DATA <table border="0" style="width: 100%;"> <tr> <td>Date: 10/22/95</td> <td>Date</td> <td>Time</td> <td>Depth, TR</td> </tr> <tr> <td>Method: Surge Block</td> <td>10/22/95</td> <td>1505</td> <td>2.94 ft</td> </tr> <tr> <td>Duration: 1 Day</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Rate: 0.780 L/minute</td> <td></td> <td></td> <td></td> </tr> </table> <p>Final Measurements:</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>pH</td> <td>Temperature (degrees C)</td> <td>Conductivity (micromhos/cm)</td> <td>Turbidity (NTU)</td> </tr> <tr> <td>6.96</td> <td>16</td> <td>550</td> <td>5.87</td> </tr> </table>	Date: 10/22/95	Date	Time	Depth, TR	Method: Surge Block	10/22/95	1505	2.94 ft	Duration: 1 Day				Rate: 0.780 L/minute				pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	6.96	16	550	5.87								
Date: 10/22/95	Date	Time	Depth, TR																																				
Method: Surge Block	10/22/95	1505	2.94 ft																																				
Duration: 1 Day																																							
Rate: 0.780 L/minute																																							
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																				
6.96	16	550	5.87																																				
		LEGEND <table border="0" style="width: 100%;"> <tr> <td></td> <td>GRAVEL</td> <td>TPC</td> <td>TOP OF PROTECTIVE CASING</td> </tr> <tr> <td></td> <td>SURFACE SEAL</td> <td>TR</td> <td>TOP OF WELL RISER</td> </tr> <tr> <td></td> <td>GROUT</td> <td>GS</td> <td>GROUND SURFACE</td> </tr> <tr> <td></td> <td>SEAL</td> <td>TBS</td> <td>TOP BENTONITE SEAL</td> </tr> <tr> <td></td> <td>SANDPACK</td> <td>TSP</td> <td>TOP OF SANDPACK</td> </tr> <tr> <td></td> <td>SAND</td> <td>TSC</td> <td>TOP OF SCREEN</td> </tr> <tr> <td></td> <td>SILT</td> <td>BSC</td> <td>BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td>CLAY</td> <td>TD</td> <td>TOTAL DEPTH</td> </tr> <tr> <td></td> <td>NO RECOVERY</td> <td>POW</td> <td>POINT OF WELL</td> </tr> </table>			GRAVEL	TPC	TOP OF PROTECTIVE CASING		SURFACE SEAL	TR	TOP OF WELL RISER		GROUT	GS	GROUND SURFACE		SEAL	TBS	TOP BENTONITE SEAL		SANDPACK	TSP	TOP OF SANDPACK		SAND	TSC	TOP OF SCREEN		SILT	BSC	BOTTOM OF SCREEN		CLAY	TD	TOTAL DEPTH		NO RECOVERY	POW	POINT OF WELL
	GRAVEL	TPC	TOP OF PROTECTIVE CASING																																				
	SURFACE SEAL	TR	TOP OF WELL RISER																																				
	GROUT	GS	GROUND SURFACE																																				
	SEAL	TBS	TOP BENTONITE SEAL																																				
	SANDPACK	TSP	TOP OF SANDPACK																																				
	SAND	TSC	TOP OF SCREEN																																				
	SILT	BSC	BOTTOM OF SCREEN																																				
	CLAY	TD	TOTAL DEPTH																																				
	NO RECOVERY	POW	POINT OF WELL																																				



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

**COMPLETION REPORT OF
WELL No. MW25-19**

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): 992227.7 751590.6
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:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
MACRO DESCRIPTION (from boring log)	DEPTH (ft.)						
				2.7	TPC	748.5	PROTECTIVE COVER Diameter: 4 inches Type: Square Box Riser Interval: 3.5 feet
				2.6	TR	748.6	
					TC		
				0.0	GS	751.2	
FL	0						RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: NA
TL				1.5	TBS	749.7	
				2.3	TSP	748.9	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 2 feet
WS				3.3	TSC	747.9	
	5			5.3	BSC	745.9	SURFACE SEAL Type: CEMENT Interval: NA
CS	6.0			6.0	POW	745.2	
							GROUT Type: NA Interval: NA
							SEAL Type: BENTONITE Interval: 0.8 feet
							SANDPACK Type: #1 and #3 Interval: 3.7 feet
				WELL DEVELOPMENT DATA		WATER LEVELS	
				Date: 1/9/94	Date	Time	Depth, TR
				Method: Bail & Pump	11/20/93	1500	4.76 ft
				Duration: 1.5 Months	11/23/93	1345	7.15 ft
				Rate: 0.3 L/minute	1/7/94	1130	6.85 ft
					1/8/94	1400	7.20 ft
					1/9/94	1105	7.32 ft
				Final Measurements:			
		pH	Temperature (degrees C)	Conductivity (micromhos/cm)		Turbidity (NTU)	
		7.62	10.5	550		5.23	
LEGEND			GRAVEL	TPC	TOP OF PROTECTIVE CASING		
			SURFACE SEAL	TR	TOP OF WELL RISER		
			GROUT	GS	GROUND SURFACE		
			SEAL	TBS	TOP BENTONITE SEAL		
			SANDPACK	TSP	TOP OF SANDPACK		
			SILT	TSC	TOP OF SCREEN		
			CLAY	BSC	BOTTOM OF SCREEN		
			NO RECOVERY	TD	TOTAL DEPTH		
				POW	POINT OF WELL		



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

**COMPLETION REPORT OF
WELL No. MW26-1**

COMPLETION REPORT OF WELL No. MW26-2

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**
 WELL INSTALLATION COMPLETED: **11/18/93**

GROUND SURFACE ELEVATION: **753.8**
 DATUM: **NGVD 88**
 GEOLOGIST: **E. Schacht**
 CHECKED BY: **F. O'Loughlin**
 CONSULTANT:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS			
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)									
				3.0	TPC	750.8	PROTECTIVE COVER Diameter: 4 inches Type: Square Box Riser Interval: 4.86 feet RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: NA SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 9 feet SURFACE SEAL Type: CEMENT Interval: NA GROUT Type: NA Interval: NA SEAL Type: BENTONITE Interval: 1.0 feet SANDPACK Type: #1 and #3 Interval: 11.1 feet			
				2.8	TR	751.0				
					TC					
				0.0	GS	753.8				
FL	0			1.9	TBS	751.9				
				2.9	TSP	750.9				
				3.9	TSC	749.9				
	5									
	10									
TL										
WS				12.9	BSC	740.9				
				14.0	POW	739.8				
CS	14.0									
							WELL DEVELOPMENT DATA			
							WATER LEVELS			
							Date: 1/9/94	Date	Time	Depth, TR
							Method: Bail	11/21/93		15.48 ft
							Duration: 3 Days	11/22/93		15.64 ft
							Rate: NA - Well Dry	1/9/94		15.67 ft
								1/12/94		Dry well
							Final Measurements:			
							pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
							NA	NA	NA	NA
							LEGEND			
								GRAVEL	TPC	TOP OF PROTECTIVE CASING
								SURFACE SEAL	TR	TOP OF WELL RISER
								GROUT	GS	GROUND SURFACE
								SEAL	TBS	TOP BENTONITE SEAL
								SANDPACK	TSP	TOP OF SANDPACK
								SAND	TSC	TOP OF SCREEN
								SILT	BSC	BOTTOM OF SCREEN
								CLAY	TD	TOTAL DEPTH
								NO RECOVERY	POW	POINT OF WELL

COMPLETION REPORT OF WELL No. MW26-3

PROJECT: SEAD-25 & SEAD-26 RI/FS	GROUND SURFACE ELEVATION: 751.5
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541	DATUM: NGVD 88
WELL LOCATION (N/E): 992216.8 751115.5	GEOLOGIST: E. Schacht
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.	CHECKED BY: F. O'Loughlin
DRILLING METHOD: Hollow Stem Auger	CONSULTANT:
WELL INSTALLATION STARTED: 11/18/93	
WELL INSTALLATION COMPLETED: 11/18/93	

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS																											
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)																																	
				2.7	TPC	748.8	PROTECTIVE COVER Diameter: 4 inches Type: Square Box Riser Interval: 4.55 feet																											
				2.6	TR	748.9																												
				0.0	TC																													
				0.0	GS	751.5																												
FL	0			1.8	TBS	749.7	RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: NA																											
				2.8	TSP	748.7																												
				4.3	TSC	747.2	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 9 feet																											
	5						SURFACE SEAL Type: CEMENT Interval: NA																											
							GROUT Type: CEMENT-BENTONITE Interval: 1.8 feet																											
							SEAL Type: BENTONITE Interval: 1.0 feet																											
	10						SANDPACK Type: #1 and #3 Interval: 11.2 feet																											
TL							WELL DEVELOPMENT DATA <table border="0" style="width: 100%; font-size: small;"> <tr> <td>Date: 11/20/93</td> <td>Date</td> <td>Time</td> <td>Depth, TR</td> </tr> <tr> <td>Method: Bail & Pump</td> <td style="text-align: center;">▽</td> <td style="text-align: center;">11/20/93</td> <td style="text-align: center;">1610</td> </tr> <tr> <td>Duration: 1 Day</td> <td style="text-align: center;">▽</td> <td style="text-align: center;">11/20/93</td> <td style="text-align: center;">1635</td> </tr> <tr> <td>Rate: 1.26 L/minute</td> <td style="text-align: center;">▽</td> <td style="text-align: center;">11/20/93</td> <td style="text-align: center;">1650</td> </tr> <tr> <td>Final Measurements:</td> <td style="text-align: center;">▽</td> <td></td> <td></td> </tr> </table>	Date: 11/20/93	Date	Time	Depth, TR	Method: Bail & Pump	▽	11/20/93	1610	Duration: 1 Day	▽	11/20/93	1635	Rate: 1.26 L/minute	▽	11/20/93	1650	Final Measurements:	▽									
Date: 11/20/93	Date	Time	Depth, TR																															
Method: Bail & Pump	▽	11/20/93	1610																															
Duration: 1 Day	▽	11/20/93	1635																															
Rate: 1.26 L/minute	▽	11/20/93	1650																															
Final Measurements:	▽																																	
WS				13.3	BSC	738.2																												
				14.0	POW	737.5																												
CS	14.0																																	
							<table border="0" style="width: 100%; font-size: small;"> <tr> <td></td> <td style="text-align: center;">Temperature</td> <td style="text-align: center;">Conductivity</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">(degrees C)</td> <td style="text-align: center;">(micromhos/cm)</td> <td style="text-align: center;">Turbidity (NTU)</td> </tr> <tr> <td style="text-align: center;">pH</td> <td style="text-align: center;">11</td> <td style="text-align: center;">700</td> <td style="text-align: center;">5.32</td> </tr> <tr> <td style="text-align: center;">6.64</td> <td></td> <td></td> <td></td> </tr> </table>		Temperature	Conductivity			(degrees C)	(micromhos/cm)	Turbidity (NTU)	pH	11	700	5.32	6.64														
	Temperature	Conductivity																																
	(degrees C)	(micromhos/cm)	Turbidity (NTU)																															
pH	11	700	5.32																															
6.64																																		
							LEGEND <table border="0" style="width: 100%; font-size: x-small;"> <tr> <td> GRAVEL</td> <td>TPC</td> <td>TOP OF PROTECTIVE CASING</td> </tr> <tr> <td> SURFACE SEAL</td> <td>TR</td> <td>TOP OF WELL RISER</td> </tr> <tr> <td> GROUT</td> <td>GS</td> <td>GROUND SURFACE</td> </tr> <tr> <td> SEAL</td> <td>TBS</td> <td>TOP BENTONITE SEAL</td> </tr> <tr> <td> SANDPACK</td> <td>TSP</td> <td>TOP OF SANDPACK</td> </tr> <tr> <td> SILT</td> <td>TSC</td> <td>TOP OF SCREEN</td> </tr> <tr> <td> CLAY</td> <td>BSC</td> <td>BOTTOM OF SCREEN</td> </tr> <tr> <td> NO RECOVERY</td> <td>TD</td> <td>TOTAL DEPTH</td> </tr> <tr> <td></td> <td>POW</td> <td>POINT OF WELL</td> </tr> </table>	GRAVEL	TPC	TOP OF PROTECTIVE CASING	SURFACE SEAL	TR	TOP OF WELL RISER	GROUT	GS	GROUND SURFACE	SEAL	TBS	TOP BENTONITE SEAL	SANDPACK	TSP	TOP OF SANDPACK	SILT	TSC	TOP OF SCREEN	CLAY	BSC	BOTTOM OF SCREEN	NO RECOVERY	TD	TOTAL DEPTH		POW	POINT OF WELL
GRAVEL	TPC	TOP OF PROTECTIVE CASING																																
SURFACE SEAL	TR	TOP OF WELL RISER																																
GROUT	GS	GROUND SURFACE																																
SEAL	TBS	TOP BENTONITE SEAL																																
SANDPACK	TSP	TOP OF SANDPACK																																
SILT	TSC	TOP OF SCREEN																																
CLAY	BSC	BOTTOM OF SCREEN																																
NO RECOVERY	TD	TOTAL DEPTH																																
	POW	POINT OF WELL																																



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

**COMPLETION REPORT OF
WELL No. MW26-3**

COMPLETION REPORT OF WELL No. MW26-4

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 WELL INSTALLATION COMPLETED: 11/19/93	GROUND SURFACE ELEVATION: 750.1 DATUM: NGVD 88 GEOLOGIST: E. Schacht CHECKED BY: F. O'Loughlin CONSULTANT:
---	--

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)						
				2.6	TPC	747.6	PROTECTIVE COVER Diameter: 4 inches Type: Square Box Riser Interval: 5.53 feet
				2.5	TR	747.6	
				0.0	TC		
				0.0	GS	750.1	
FL	0						RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: NA
				3.0	TBS	747.1	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 4 feet
				4.5	TSP	745.6	
	5						SURFACE SEAL Type: CEMENT Interval: NA
TL				6.4	TSC	743.7	GROUT Type: CEMENT-BENTONITE Interval: 3.0 feet
							SEAL Type: BENTONITE Interval: 1.5 feet
WS	10			10.4	BSC	739.7	SANDPACK Type: #1 and #3 Interval: 7.0 feet
				11.5	POW	738.6	
CS	11.5						

WELL DEVELOPMENT DATA Date: 11/21/93 Method: Bail & Pump Duration: 1 Day Rate: 1 L/minute	WATER LEVELS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">11/21/93</td> <td style="text-align: center;">0950</td> <td style="text-align: center;">11.4 ft</td> </tr> <tr> <td style="text-align: center;">11/21/93</td> <td style="text-align: center;">1030</td> <td style="text-align: center;">10.74 ft</td> </tr> <tr> <td style="text-align: center;">11/21/93</td> <td style="text-align: center;">1140</td> <td style="text-align: center;">11.10 ft</td> </tr> <tr> <td style="text-align: center;">11/21/93</td> <td style="text-align: center;">1155</td> <td style="text-align: center;">11.10 ft</td> </tr> </tbody> </table>	Date	Time	Depth, TR	11/21/93	0950	11.4 ft	11/21/93	1030	10.74 ft	11/21/93	1140	11.10 ft	11/21/93	1155	11.10 ft
Date	Time	Depth, TR														
11/21/93	0950	11.4 ft														
11/21/93	1030	10.74 ft														
11/21/93	1140	11.10 ft														
11/21/93	1155	11.10 ft														

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
7.07	12	850	6.13

LEGEND	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL
---------------	---	--



**Seneca Army Depot
Romulus, New York**

COMPLETION REPORT OF WELL No. MW26-4

COMPLETION REPORT OF WELL No. MW26-5

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.
DRILLING METHOD: Hollow Stem Auger
WELL INSTALLATION STARTED: 09/24/95
WELL INSTALLATION COMPLETED: 09/24/95

GROUND SURFACE ELEVATION: 754.6
DATUM: NGVD 88
GEOLOGIST: F. O'Loughlin
CHECKED BY: P.Feschbach-Meriney
CONSULTANT:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)					
				2.4	TPC	752.3
				2.1	TR	752.6
				0.0	GS	754.6
FL	0			2.5	TBS	752.1
				3.8	TSP	750.8
	5			4.9	TSC	749.7
TL				13.9	BSC	740.8
WS	10			15.0	POW	739.6
CS	15					

PROTECTIVE COVER			
Diameter: 4 inches			
Type: Square Box Riser			
Interval: 4.9 feet			
RISER			
Diameter: 2 inches			
Type: SCHEDULE 40-PVC			
Interval: 6.8 feet			
SCREEN			
Diameter: 2 inches			
Type: SCH 40-PVC, 0.010" slot			
Interval: 8.95 feet			
SURFACE SEAL			
Type: CEMENT			
Interval: NA			
GROUT			
Type: NA			
Interval: NA			
SEAL			
Type: BENTONITE			
Interval: 1.3 feet			
SANDPACK			
Type: Morie 0 and Morie 000			
Interval: 10.05 feet			
WELL DEVELOPMENT DATA		WATER LEVELS	
Date: 10/19/95		Date	Time
Method: Surge Block	10/17/95	1514	12.66 ft
Duration: 3 Days	10/18/95	1128	12.68 ft
Rate: 0.24 L/minute	10/18/95	1253	13.57 ft
	10/18/95	1712	12.74 ft
Final Measurements:			
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
6.55	15.5	925	8.5

LEGEND		GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL
---------------	--	---	--



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW26-5

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.
DRILLING METHOD: Hollow Stem Auger
WELL INSTALLATION STARTED: 09/23/95
WELL INSTALLATION COMPLETED: 09/23/95

GROUND SURFACE ELEVATION: 754.7
DATUM: NGVD 88
GEOLOGIST: F. O'Loughlin
CHECKED BY: P.Feschbach-Meriney
CONSULTANT:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS			
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)									
				2.3	TPC	752.4	PROTECTIVE COVER Diameter: 4 inches Type: Square Box Riser Interval: 4.78 feet RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 6.9 feet SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 9 feet SURFACE SEAL Type: CEMENT Interval: 2.5 feet GROUT Type: NA Interval: NA SEAL Type: BENTONITE Interval: 1.3 feet SANDPACK Type: Morie 0 and Morie 000 Interval: 11.2 feet			
				2.0	TR	752.7				
					TC					
				0.0	GS	754.7				
FL	0			2.5	TBS	752.2				
				3.8	TSP	750.9				
				4.9	TSC	749.8				
	5									
TL	10									
WS				13.9	BSC	740.8				
				15.0	POW	739.7				
CS	15.0									

WELL DEVELOPMENT DATA			WATER LEVELS		
Date	Method	Rate	Date	Time	Depth, TR
10/18/95	Surge Block	0.650 L/minute	10/18/95	0950	12.70 ft
			10/19/95	0932	12.73 ft
Final Measurements:					
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)		
6.55	16.5	490	3.4		

LEGEND SURFACE SEAL GROUT SEAL SANDPACK	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL
--	---	--



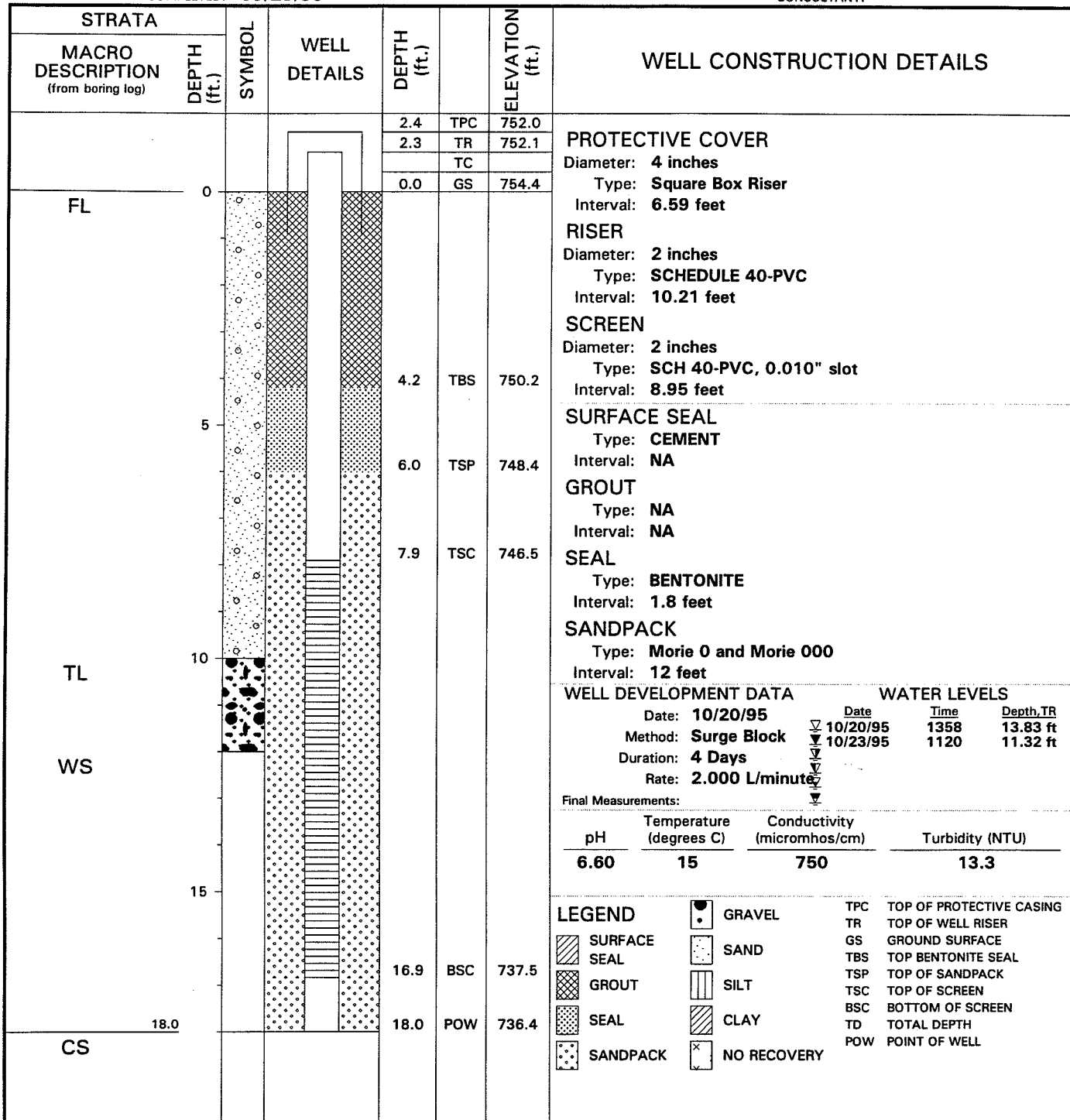
ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

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

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 DRILLING CONTRACTOR: Empire Soils Investigation, Inc. DRILLING METHOD: Hollow Stem Auger WELL INSTALLATION STARTED: 09/23/95 WELL INSTALLATION COMPLETED: 09/23/95	GROUND SURFACE ELEVATION: 754.4 DATUM: NGVD 88 GEOLOGIST: F. O'Loughlin CHECKED BY: P.Feschbach-Meriney CONSULTANT:
---	---



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW26-7

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 DRILLING CONTRACTOR: Empire Soils Investigation, Inc. DRILLING METHOD: Hollow Stem Auger WELL INSTALLATION STARTED: 09/21/95 WELL INSTALLATION COMPLETED: 09/21/95	GROUND SURFACE ELEVATION: 750.5 DATUM: NGVD 88 GEOLOGIST: F. O'Loughlin CHECKED BY: P.Feschbach-Meriney CONSULTANT:
---	---

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS																											
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)																																
				2.1	TPC	748.4																											
				1.9	TR	748.7																											
				0.0	GS	750.5																											
FL	0	[Symbol]	[Diagram]			PROTECTIVE COVER Diameter: 4 inches Type: Square Box Riser Interval: 5.13 feet																											
				3.0	TBS	747.5																											
				4.7	TSP	745.8																											
	5			6.3	TSC	744.2																											
TL		[Symbol]	[Diagram]			RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 8.17 feet																											
				10.3	BSC	740.2																											
WS	10					SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 4 feet																											
	11.5			11.5	POW	739.0																											
CS						SURFACE SEAL Type: CEMENT Interval: NA																											
						GROUT Type: NA Interval: NA																											
						SEAL Type: BENTONITE Interval: 1.7 feet																											
						SANDPACK Type: Morie 0 and Morie 000 Interval: 6.8 feet																											
						WELL DEVELOPMENT DATA																											
						<table border="0" style="width: 100%;"> <tr> <td>Date: 10/16/95</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Time</td> <td style="text-align: center;">Depth, TR</td> </tr> <tr> <td>Method: Surge Block</td> <td style="text-align: center;">▽ 10/16/95</td> <td style="text-align: center;">1120</td> <td style="text-align: center;">10.50 ft</td> </tr> <tr> <td>Duration: 2 Days</td> <td style="text-align: center;">▽ 10/17/95</td> <td style="text-align: center;">0755</td> <td style="text-align: center;">10.60 ft</td> </tr> <tr> <td>Rate: 0.160 L/minute</td> <td style="text-align: center;">▽ 10/17/95</td> <td style="text-align: center;">1133</td> <td style="text-align: center;">10.73 ft</td> </tr> </table>	Date: 10/16/95	Date	Time	Depth, TR	Method: Surge Block	▽ 10/16/95	1120	10.50 ft	Duration: 2 Days	▽ 10/17/95	0755	10.60 ft	Rate: 0.160 L/minute	▽ 10/17/95	1133	10.73 ft											
Date: 10/16/95	Date	Time	Depth, TR																														
Method: Surge Block	▽ 10/16/95	1120	10.50 ft																														
Duration: 2 Days	▽ 10/17/95	0755	10.60 ft																														
Rate: 0.160 L/minute	▽ 10/17/95	1133	10.73 ft																														
						Final Measurements:																											
						<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">pH</td> <td style="text-align: center;">Temperature (degrees C)</td> <td style="text-align: center;">Conductivity (micromhos/cm)</td> <td style="text-align: center;">Turbidity (NTU)</td> </tr> <tr> <td style="text-align: center;">6.71</td> <td style="text-align: center;">15.0</td> <td style="text-align: center;">700</td> <td style="text-align: center;">17.1</td> </tr> </table>	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	6.71	15.0	700	17.1																			
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																														
6.71	15.0	700	17.1																														
						LEGEND																											
						<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">[Symbol] SURFACE SEAL</td> <td style="width: 30%;">[Symbol] GRAVEL</td> <td style="width: 30%;">[Symbol] TPC TOP OF PROTECTIVE CASING</td> </tr> <tr> <td>[Symbol] GROUT</td> <td>[Symbol] SAND</td> <td>[Symbol] TR TOP OF WELL RISER</td> </tr> <tr> <td>[Symbol] SEAL</td> <td>[Symbol] SILT</td> <td>[Symbol] GS GROUND SURFACE</td> </tr> <tr> <td>[Symbol] SANDPACK</td> <td>[Symbol] CLAY</td> <td>[Symbol] TBS TOP OF BENTONITE SEAL</td> </tr> <tr> <td></td> <td>[Symbol] NO RECOVERY</td> <td>[Symbol] TSP TOP OF SANDPACK</td> </tr> <tr> <td></td> <td></td> <td>[Symbol] TSC TOP OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>[Symbol] BSC BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>[Symbol] TD TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td>[Symbol] POW POINT OF WELL</td> </tr> </table>	[Symbol] SURFACE SEAL	[Symbol] GRAVEL	[Symbol] TPC TOP OF PROTECTIVE CASING	[Symbol] GROUT	[Symbol] SAND	[Symbol] TR TOP OF WELL RISER	[Symbol] SEAL	[Symbol] SILT	[Symbol] GS GROUND SURFACE	[Symbol] SANDPACK	[Symbol] CLAY	[Symbol] TBS TOP OF BENTONITE SEAL		[Symbol] NO RECOVERY	[Symbol] TSP TOP OF SANDPACK			[Symbol] TSC TOP OF SCREEN			[Symbol] BSC BOTTOM OF SCREEN			[Symbol] TD TOTAL DEPTH			[Symbol] POW POINT OF WELL
[Symbol] SURFACE SEAL	[Symbol] GRAVEL	[Symbol] TPC TOP OF PROTECTIVE CASING																															
[Symbol] GROUT	[Symbol] SAND	[Symbol] TR TOP OF WELL RISER																															
[Symbol] SEAL	[Symbol] SILT	[Symbol] GS GROUND SURFACE																															
[Symbol] SANDPACK	[Symbol] CLAY	[Symbol] TBS TOP OF BENTONITE SEAL																															
	[Symbol] NO RECOVERY	[Symbol] TSP TOP OF SANDPACK																															
		[Symbol] TSC TOP OF SCREEN																															
		[Symbol] BSC BOTTOM OF SCREEN																															
		[Symbol] TD TOTAL DEPTH																															
		[Symbol] POW POINT OF WELL																															



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

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

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
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.
DRILLING METHOD: Hollow Stem Auger
WELL INSTALLATION STARTED: 09/25/95
WELL INSTALLATION COMPLETED: 09/25/95

GROUND SURFACE ELEVATION: 750.9
DATUM: NGVD 88
GEOLOGIST: F. O'Loughlin
CHECKED BY: P.Feschbach-Meriney
CONSULTANT:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)						
				2.2	TPC	748.6	PROTECTIVE COVER Diameter: 4 inches Type: Square Box Riser Interval: 5.25 feet RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 9.14 feet SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 4 feet SURFACE SEAL Type: CEMENT Interval: NA GROUT Type: NA Interval: NA SEAL Type: BENTONITE Interval: 2.0 feet SANDPACK Type: Morie 0 and Morie 000 Interval: 7.2 feet
				2.1	TR	748.8	
					TC		
				0.0	GS	750.9	
FL	0			3.0	TBS	747.9	
	5			5.0	TSP	745.9	
TL				7.1	TSC	743.8	
WS	10			11.1	BSC	739.8	
	12.2			12.2	POW	738.7	
CS							

WELL DEVELOPMENT DATA		WATER LEVELS					
Date:	10/16/95	Date	10/16/95	Time	1338	Depth, TR	10.63 ft
Method:	Surge Block		10/16/95		1552		10.98 ft
Duration:	1 Day						
Rate:	0.280 L/minute						
Final Measurements:							
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)				
6.90	13.75	625	8.38				

LEGEND SURFACE SEAL GROUT SEAL SANDPACK	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL
--	---	--



ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

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

COMPLETION REPORT OF WELL No. MW26-10

PROJECT: SEAD-25 & SEAD-26 RI/FS
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541
WELL LOCATION (N/E): 991652.5 751206.3
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.
DRILLING METHOD: Hollow Stem Auger
WELL INSTALLATION STARTED: 09/20/95
WELL INSTALLATION COMPLETED: 09/20/95

GROUND SURFACE ELEVATION: 751.5
DATUM: NGVD 88
GEOLOGIST: F. O'Loughlin
CHECKED BY: P.Feschbach-Meriney
CONSULTANT:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)	WELL CONSTRUCTION DETAILS																
MACRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft.)																						
				2.0	TPC	749.5	PROTECTIVE COVER Diameter: 4 inches Type: Square Box Riser Interval: 3.95 feet																
				1.8	TR	749.7																	
					TC																		
				0.0	GS	751.5																	
FL	0			2.0	TBS	749.5	RISER Diameter: 2 inches Type: SCHEDULE 40-PVC Interval: 6.10 feet																
				3.2	TSP	748.3	SCREEN Diameter: 2 inches Type: SCH 40-PVC, 0.010" slot Interval: 6.9 feet																
				4.3	TSC	747.2																	
	5						SURFACE SEAL Type: CEMENT Interval: NA																
TL							GROUT Type: NA Interval: NA																
WS							SEAL Type: BENTONITE Interval: 1.2 feet																
	10						SANDPACK Type: Morie 0 and Morie 000 Interval: 8.3 feet																
				11.2	BSC	740.3	WELL DEVELOPMENT DATA <table style="float: right; border-collapse: collapse;"> <thead> <tr> <th colspan="2"></th> <th colspan="2">WATER LEVELS</th> </tr> <tr> <th>Date</th> <th>Time</th> <th>Date</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>10/16/95</td> <td>1504</td> <td>10/16/95</td> <td>9.83 ft</td> </tr> <tr> <td>10/23/95</td> <td>0830</td> <td>10/23/95</td> <td>8.12 ft</td> </tr> </tbody> </table>			WATER LEVELS		Date	Time	Date	Depth, TR	10/16/95	1504	10/16/95	9.83 ft	10/23/95	0830	10/23/95	8.12 ft
		WATER LEVELS																					
Date	Time	Date	Depth, TR																				
10/16/95	1504	10/16/95	9.83 ft																				
10/23/95	0830	10/23/95	8.12 ft																				
	12.0			12.0	POW	739.5																	
CS							Final Measurements: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td>7.25</td> <td>15.6</td> <td>1250</td> <td>3.41</td> </tr> </tbody> </table>	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.25	15.6	1250	3.41								
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																				
7.25	15.6	1250	3.41																				
		LEGEND																					
SURFACE SEAL		GRAVEL		SAND		TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER																	
GROUT		SILT		CLAY		TSP TOP OF SANDPACK TSC TOP OF SCREEN																	
SEAL		NO RECOVERY				BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL																	
SANDPACK																							



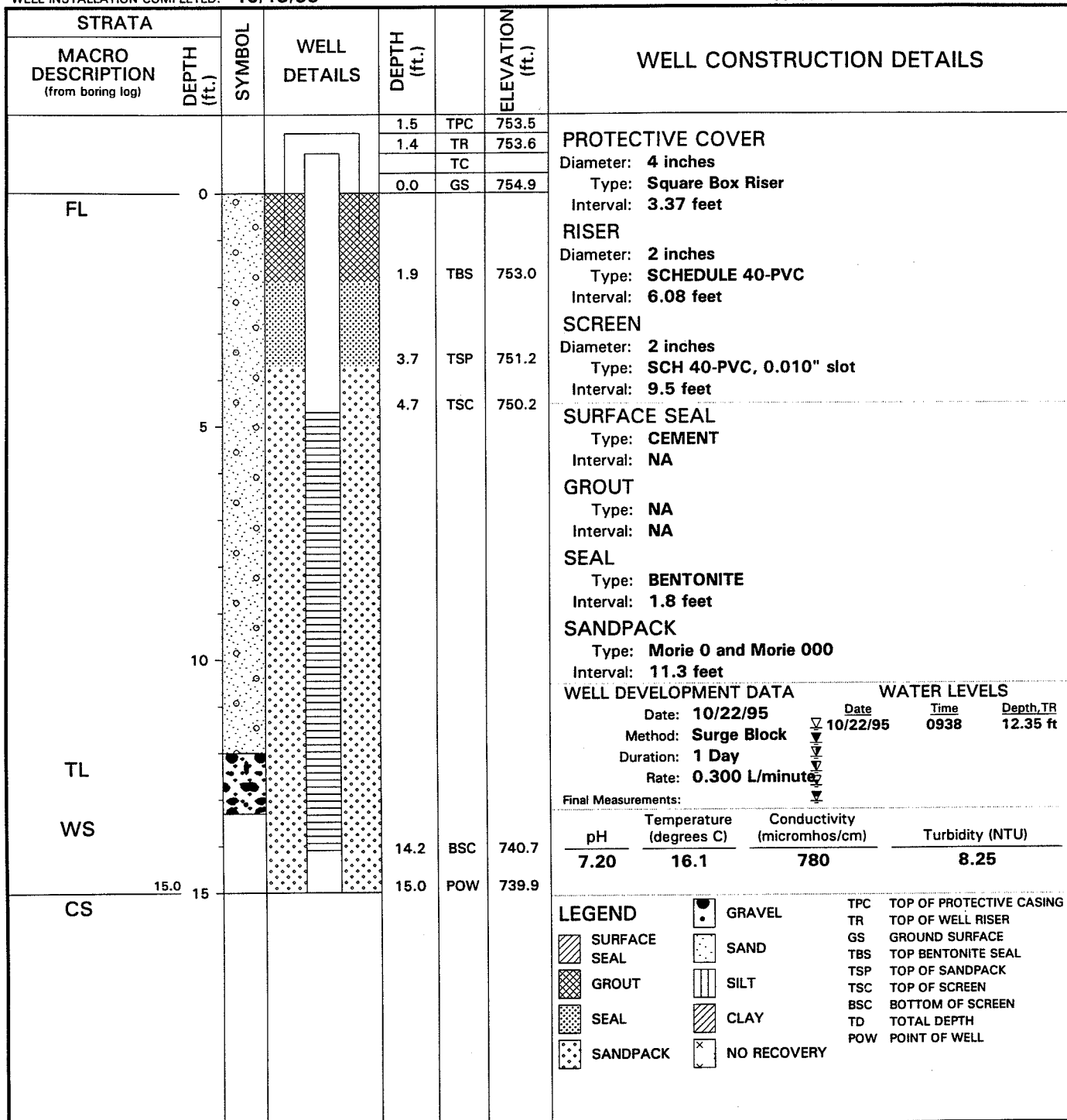
ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

**COMPLETION REPORT OF
WELL No. MW26-10**

COMPLETION REPORT OF WELL No. MW26-11

PROJECT: SEAD-25 & SEAD-26 RI/FS	GROUND SURFACE ELEVATION: 754.9
PROJECT LOCATION: Seneca Army Depot Activity, Romulus, NY 14541	DATUM: NGVD 88
WELL LOCATION (N/E): 992690.3 751235.7	GEOLOGIST: F. O'Loughlin
DRILLING CONTRACTOR: Empire Soils Investigation, Inc.	CHECKED BY: P.Feschbach-Meriney
DRILLING METHOD: Hollow Stem Auger	CONSULTANT:
WELL INSTALLATION STARTED: 10/19/95	
WELL INSTALLATION COMPLETED: 10/19/95	



ENGINEERING-SCIENCE, INC.

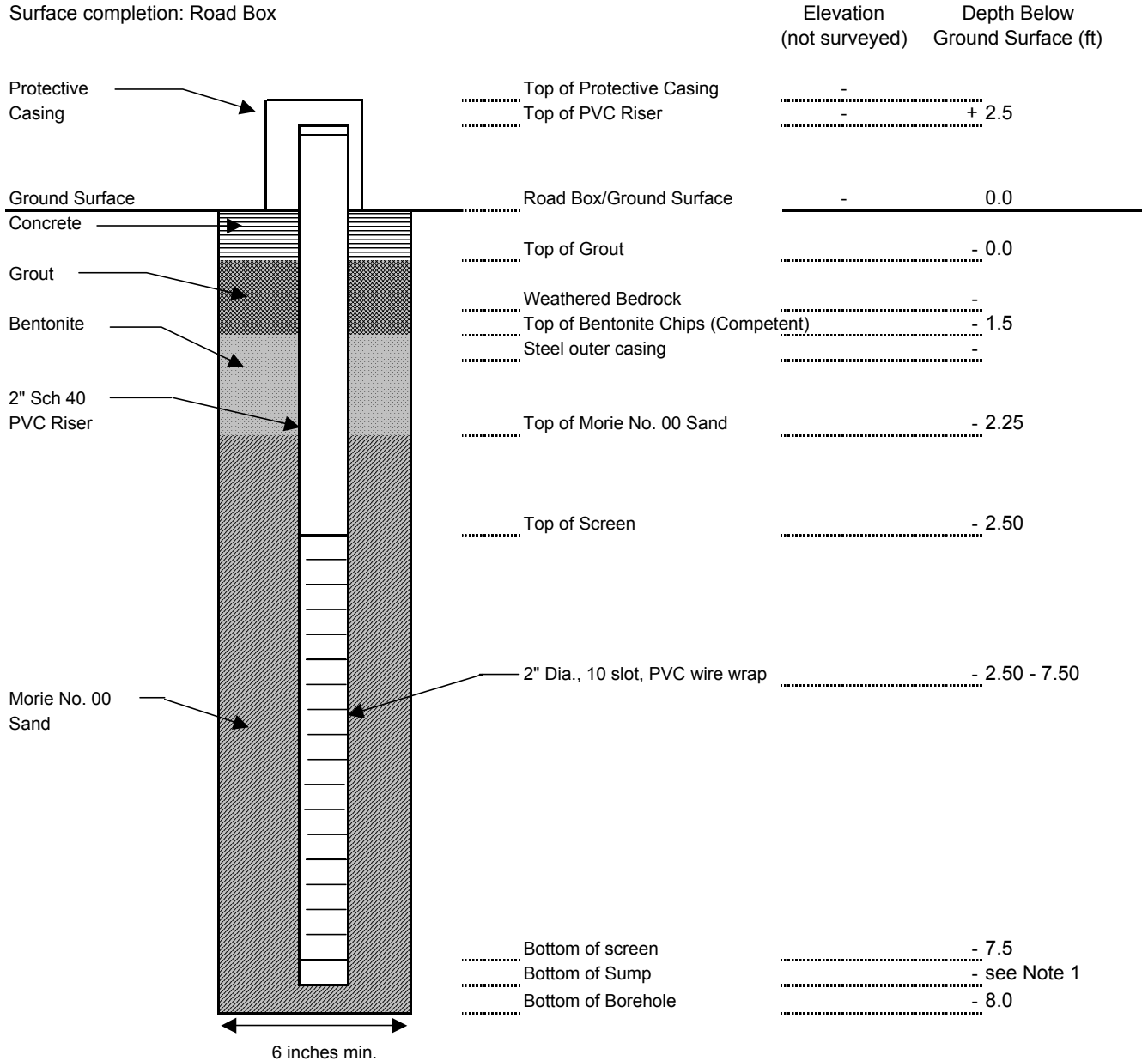
Seneca Army Depot
Romulus, New York

**COMPLETION REPORT OF
WELL No. MW26-11**

**Monitoring Well Construction Detail
SEAD-48
Seneca Army Depot Activity**

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

Surface completion: Road Box



Not to scale

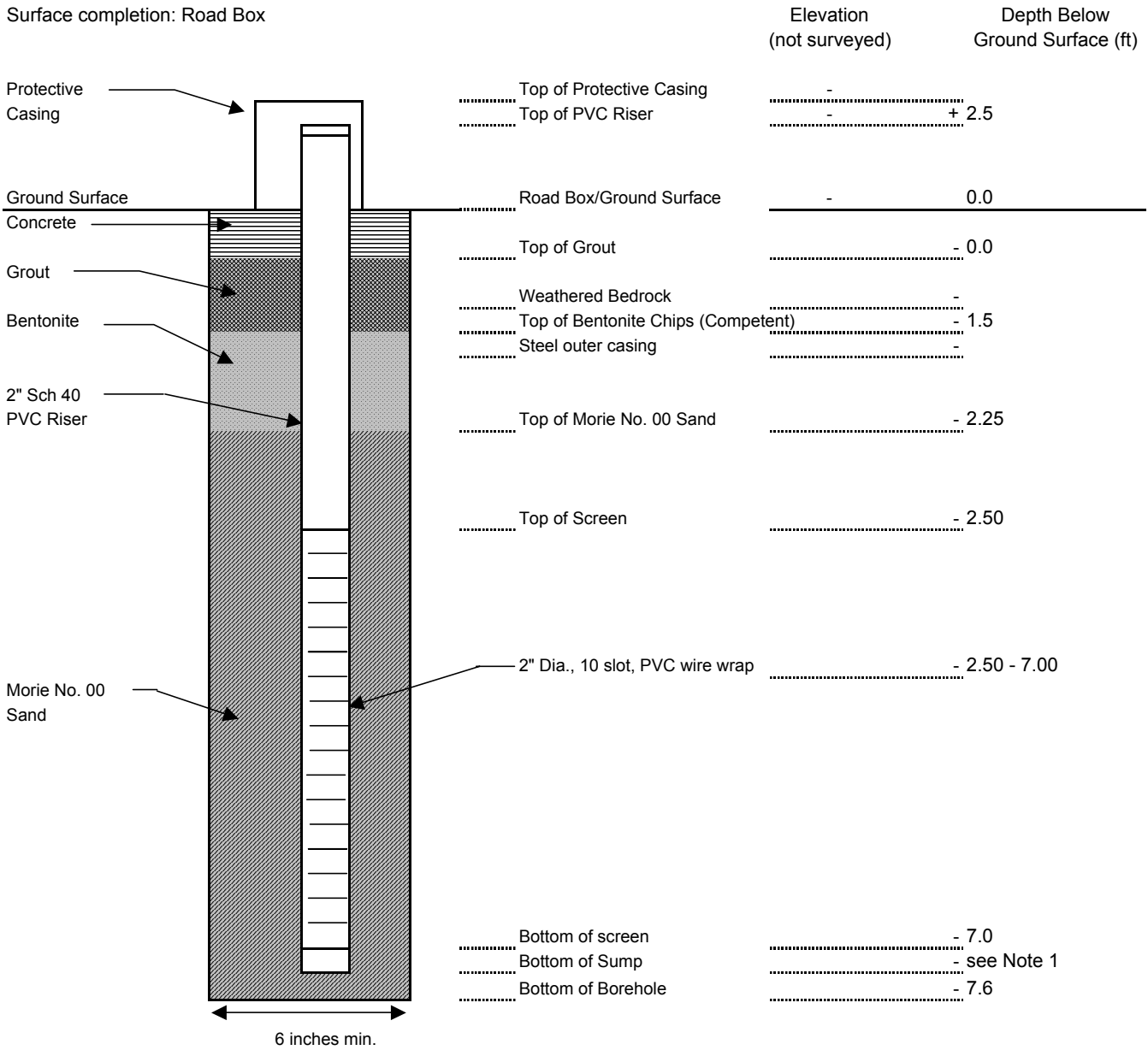
Notes:

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

**Monitoring Well Construction Detail
SEAD-48
Seneca Army Depot Activity**

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

Surface completion: Road Box



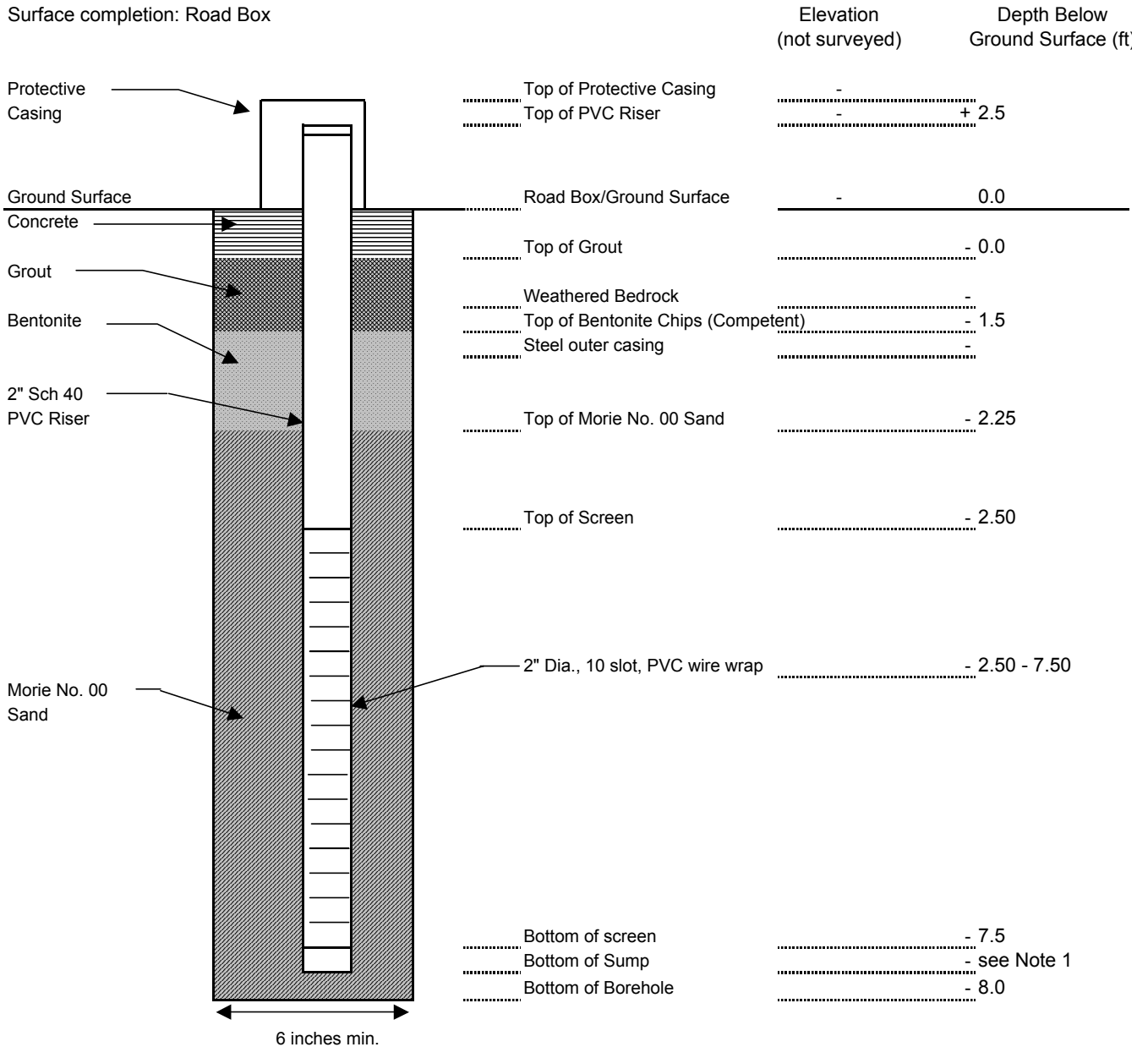
Not to scale

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

Monitoring Well Construction Detail SEAD-48 Seneca Army Depot Activity

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

Surface completion: Road Box



Not to scale

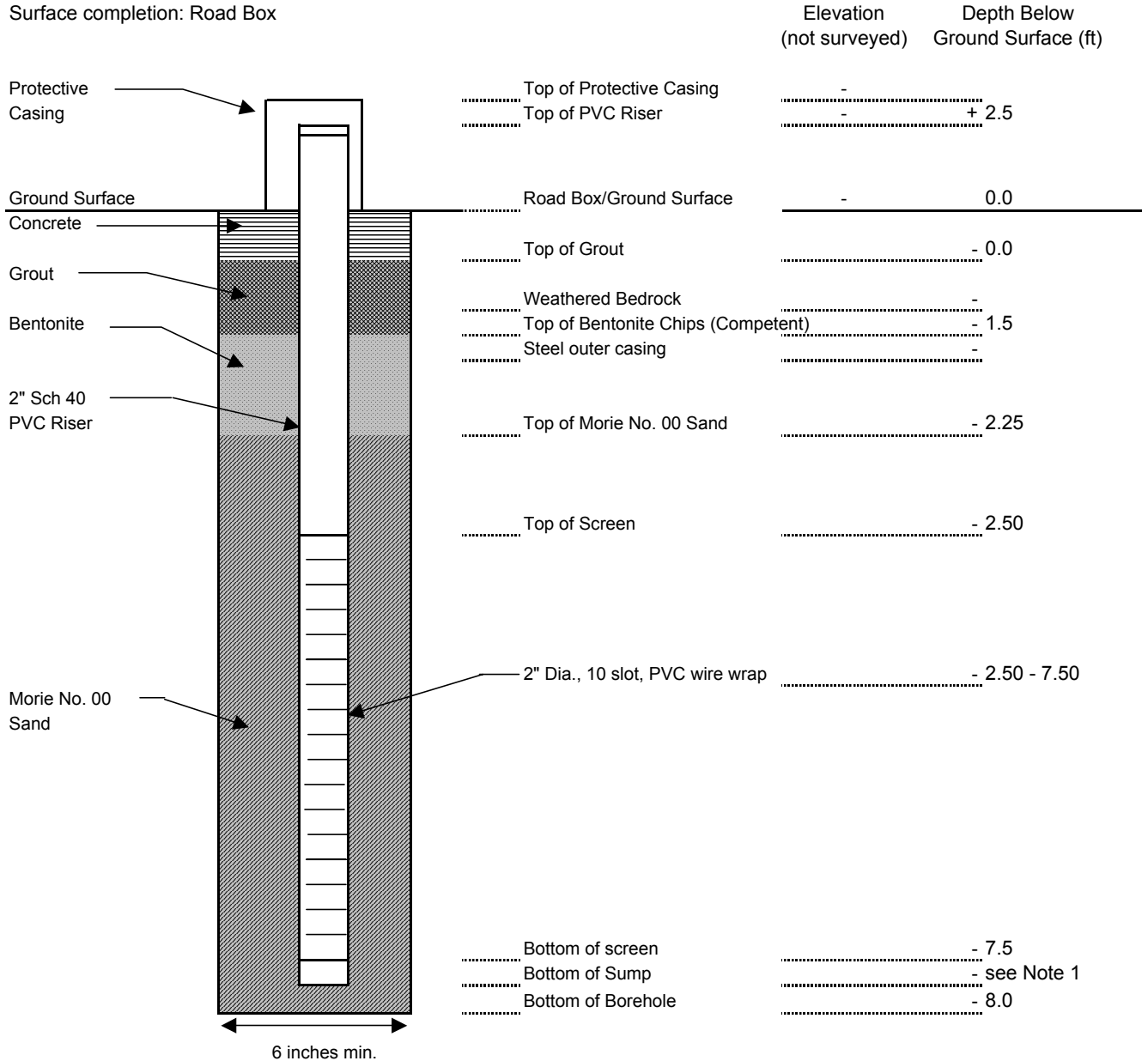
Notes:

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

**Monitoring Well Construction Detail
SEAD-48
Seneca Army Depot Activity**

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

Surface completion: Road Box



Not to scale

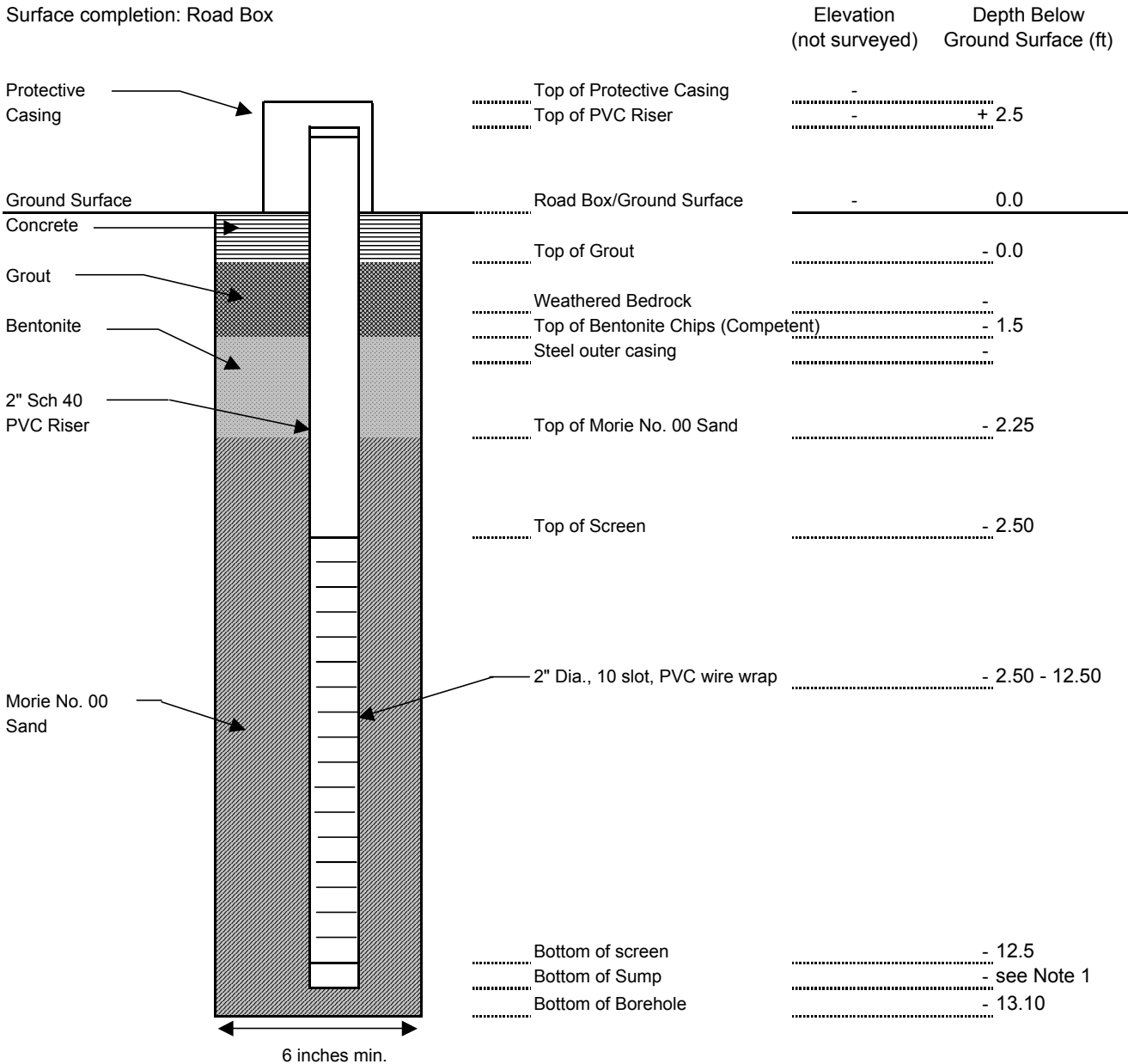
Notes:

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

Monitoring Well Construction Detail SEAD-48 Seneca Army Depot Activity

Project:	SEAD-48	Drilling Contractor:	Lyon Drilling, Inc.
Well Number:	MW48-5	Date Started:	8/18/2003
Geologist:	E. Ashton	Date Completed:	8/18/2003

Surface completion: Road Box



Not to scale

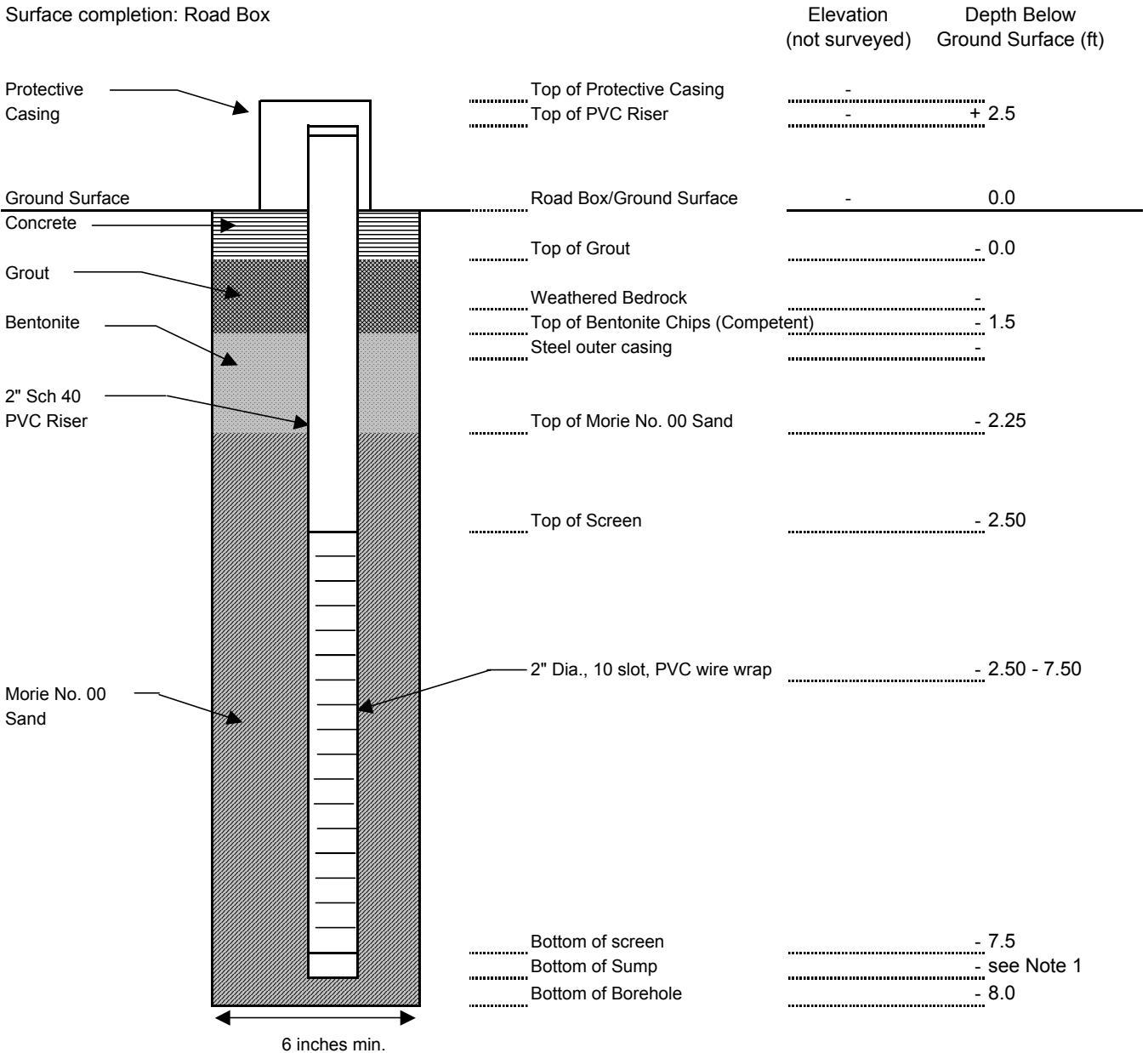
Notes:

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

**Monitoring Well Construction Detail
SEAD-48
Seneca Army Depot Activity**

Project:	SEAD-48	Drilling Contractor:	Lyon Drilling, Inc.
Well Number:	MW48-6	Date Started:	8/18/2003
Geologist:	E. Ashton	Date Completed:	8/18/2003

Surface completion: Road Box



Not to scale

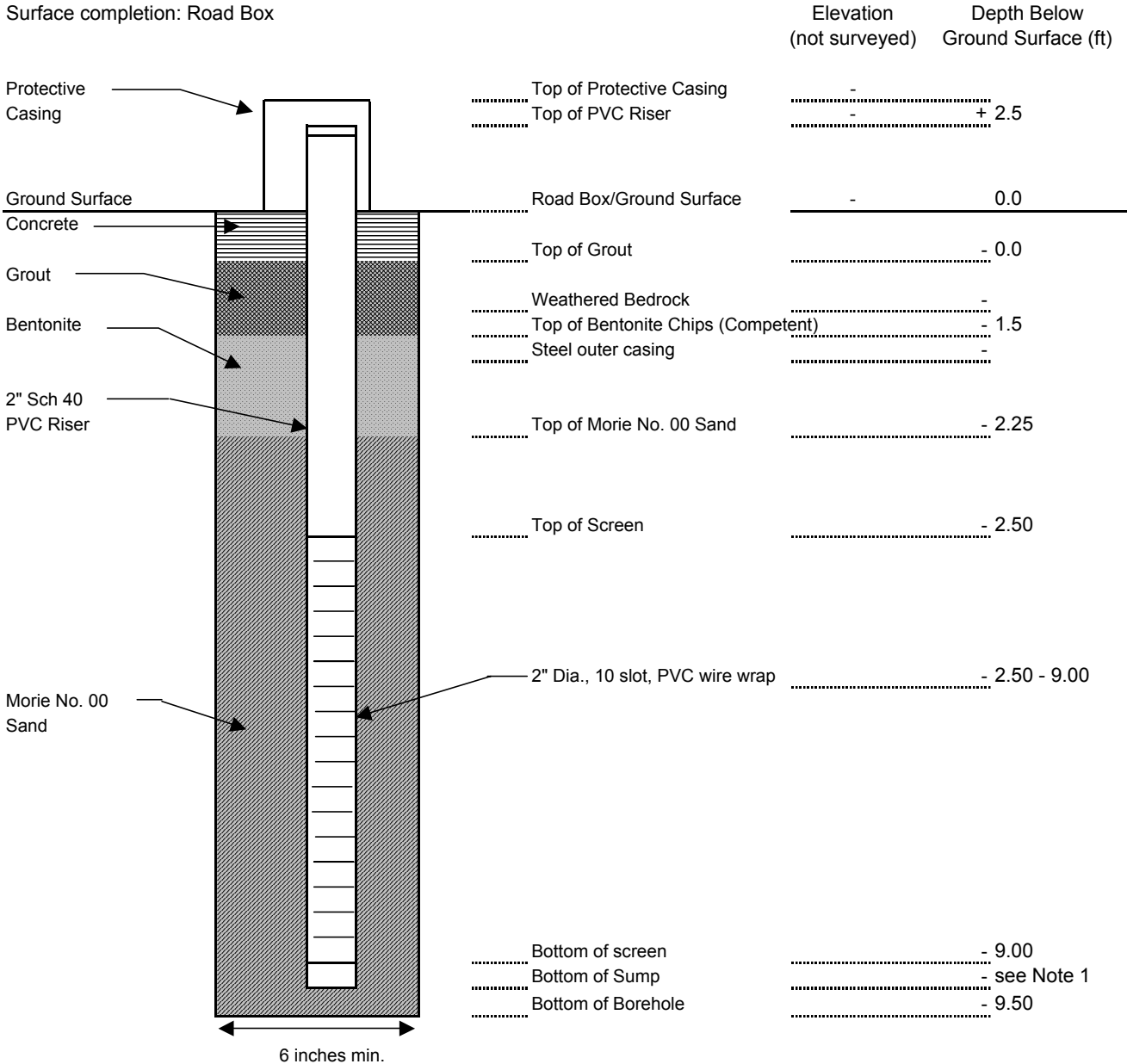
Notes:

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

**Monitoring Well Construction Detail
SEAD-48
Seneca Army Depot Activity**

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



Not to scale

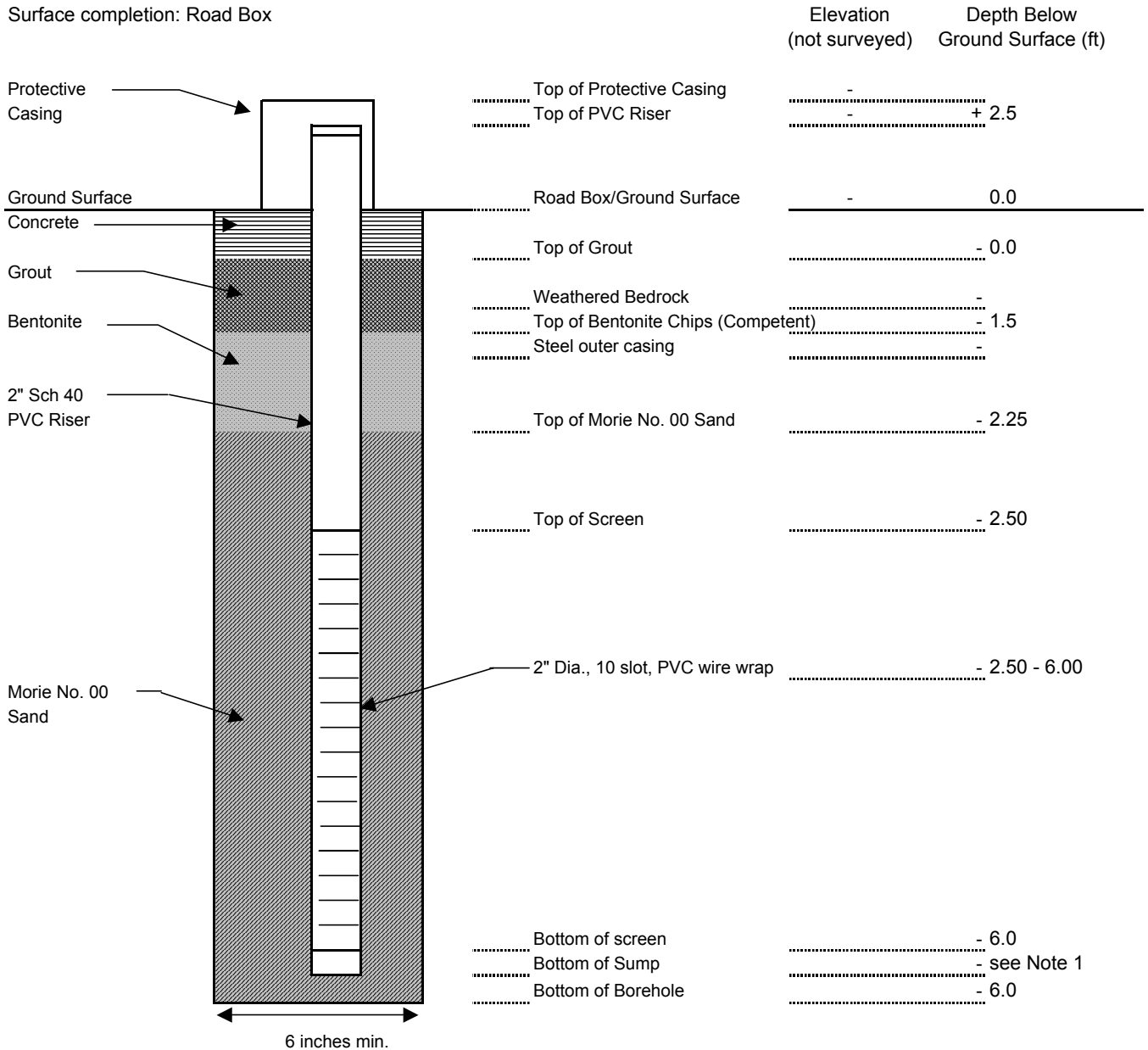
Notes:

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

**Monitoring Well Construction Detail
SEAD-48
Seneca Army Depot Activity**

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



Not to scale

Notes:

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

COMPLETION REPORT OF WELL No. MW59-1

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: **03/18/94**
 WELL INSTALLATION COMPLETED: **03/19/94**

WELL LOCATION (N/E): **998909.7 749948.8**
 REFERENCE COORDINATE SYSTEM: **New York State Plane**
 GROUND SURFACE ELEVATION (ft): **733.4**
 DATUM: **NAD 1983**
 GEOLOGIST: **F. O'LOUGHLIN**
 CHECKED BY: **KK**

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
MICRO DESCRIPTION (from boring log)	DEPTH (ft)					
				TPC		PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 3.65 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 3.95 SURFACE SEAL Type: CEMENT Interval: 2 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE CHIPS Interval: 1.2 SANDPACK Type: #1, #3 Interval: 6
				TR		
				TC		
			0.0	GS	733.4	
ML	0	[Symbol]				
ML						
ML-CL			2.0	TBS	731.4	
-						
ML-CL			3.2	TSP	730.2	
-						
			4.2	TSC	729.2	
GM						
ML-CL	5					
-						
GM						
GP						
-						
GM			8.1	BSC	725.3	
GM						
ML-CL			9.2	POW	724.2	
-						
	10.1					
	10					

WELL DEVELOPMENT DATA		WATER LEVELS		
Date:	3/21/94	Date	Time	Depth, TR
Method:	BAIL/PUMP	3/21	0930	1.72
Duration:	80 MIN	3/21	1055	3.08
Rate:	2.1 L/MIN			
Final Measurements:				
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	
7.30	5	700	38.9	

LEGEND [Symbol] SURFACE SEAL [Symbol] GROUT [Symbol] SEAL [Symbol] SANDPACK	[Symbol] GRAVEL [Symbol] SAND [Symbol] SILT [Symbol] CLAY [Symbol] NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TG TOP OF GROUT TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL
--	--	---



ENGINEERING-SCIENCE, INC.

UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York

**COMPLETION REPORT OF
 WELL No. MW59-1**

COMPLETION REPORT OF WELL No. MW59-2

<p>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: 03/06/94 WELL INSTALLATION COMPLETED: 03/06/94</p>	<p>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 CHECKED BY: KK</p>
---	---

STRATA	SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																														
				TPC	PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 6.2 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 4, .9 SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 2 SANDPACK Type: #1, #3 Interval: 7.9																														
			0.0	GS		734.3																													
GM ML			1.5	TBS		732.8																													
- ML-CL			3.5	TSP		730.8																													
GM ML			4.7	TSC	729.6																														
- ML ML ML GM ML			10.5	BSC	723.8																														
- SM SM ML - ML GP ML GP ML ML			11.4	POW	722.9																														
					WELL DEVELOPMENT DATA Date: 3/8/94 Method: BAIL/PUMP Duration: 67 MIN Rate: 2.1 L/MIN Final Measurements:																														
					WATER LEVELS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>3/8</td> <td>1310</td> <td>3.40</td> </tr> <tr> <td>3/8</td> <td>1407</td> <td>3.60</td> </tr> </tbody> </table>	Date	Time	Depth, TR	3/8	1310	3.40	3/8	1407	3.60																					
Date	Time	Depth, TR																																	
3/8	1310	3.40																																	
3/8	1407	3.60																																	
					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td>7.32</td> <td>6.5</td> <td>600</td> <td>2.9</td> </tr> </tbody> </table>	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.32	6.5	600	2.9																						
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																
7.32	6.5	600	2.9																																
					LEGEND <table border="0" style="width: 100%;"> <tr> <td style="width: 33%;"> SURFACE SEAL</td> <td style="width: 33%;"> SAND</td> <td style="width: 33%;">TPC TOP OF PROTECTIVE CASING</td> </tr> <tr> <td> GROUT</td> <td> SILT</td> <td>TR TOP OF WELL RISER</td> </tr> <tr> <td> SEAL</td> <td> CLAY</td> <td>GS GROUND SURFACE</td> </tr> <tr> <td> SANDPACK</td> <td> NO RECOVERY</td> <td>TG TOP OF GROUT</td> </tr> <tr> <td></td> <td></td> <td>TBS TOP BENTONITE SEAL</td> </tr> <tr> <td></td> <td></td> <td>TSP TOP OF SANDPACK</td> </tr> <tr> <td></td> <td></td> <td>TSC TOP OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>BSC BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>TD TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td>POW POINT OF WELL</td> </tr> </table>	SURFACE SEAL	SAND	TPC TOP OF PROTECTIVE CASING	GROUT	SILT	TR TOP OF WELL RISER	SEAL	CLAY	GS GROUND SURFACE	SANDPACK	NO RECOVERY	TG TOP OF GROUT			TBS TOP BENTONITE SEAL			TSP TOP OF SANDPACK			TSC TOP OF SCREEN			BSC BOTTOM OF SCREEN			TD TOTAL DEPTH			POW POINT OF WELL
SURFACE SEAL	SAND	TPC TOP OF PROTECTIVE CASING																																	
GROUT	SILT	TR TOP OF WELL RISER																																	
SEAL	CLAY	GS GROUND SURFACE																																	
SANDPACK	NO RECOVERY	TG TOP OF GROUT																																	
		TBS TOP BENTONITE SEAL																																	
		TSP TOP OF SANDPACK																																	
		TSC TOP OF SCREEN																																	
		BSC BOTTOM OF SCREEN																																	
		TD TOTAL DEPTH																																	
		POW POINT OF WELL																																	

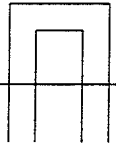




























COMPLETION REPORT OF WELL No. MW59-3

PROJECT: EIGHT MODERATELY LOW PRIORITY AOCs	WELL LOCATION (N/E): 999030.0 750345.9
PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS NY	REFERENCE COORDINATE SYSTEM: New York State Plane
DRILLING CONTRACTOR: EMPIRE SOILS INVESTIGATIONS	GROUND SURFACE ELEVATION (ft): 737.7
DRILLING METHOD: HOLLOW STEM AUGER	DATUM: NAD 1983
WELL INSTALLATION STARTED: 03/18/94	GEOLOGIST: F. O'LOUGHLIN
WELL INSTALLATION COMPLETED: 03/18/94	CHECKED BY: KK

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																													
MICRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft)																																		
					TPC	PROTECTIVE COVER Diameter: 4 Type: ROADWAY BOX Interval: 3.5																													
					TR																														
					TC																														
	0			0.0	GS		737.7																												
GM				0.8	TBS	736.9	RISER Diameter: 2 Type: SCH. 40-PVC Interval: 2.85																												
GM			2.4	TSP	735.3	SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 3.95																													
ML			3.7	TSC	734.0	SURFACE SEAL Type: CEMENT Interval: .8																													
ML			5			GROUT Type: N/A Interval: N/A																													
PT			7.7	BSC	730.0	SEAL Type: BENTONITE Interval: 1.6																													
- CL			8.8	POW	728.9	SANDPACK Type: #1, #3 Interval:																													
- CL						WELL DEVELOPMENT DATA																													
- GP						WATER LEVELS																													
CL						Date: 3/20/94 Method: BAIL/PUMP Duration: 55 MIN Rate: 2 L/MIN Final Measurements:																													
- CL						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">3/20</td> <td style="text-align: center;">1140</td> <td style="text-align: center;">1.44</td> </tr> <tr> <td style="text-align: center;">3/20</td> <td style="text-align: center;">1227</td> <td style="text-align: center;">1.70</td> </tr> </tbody> </table>	Date	Time	Depth, TR	3/20	1140	1.44	3/20	1227	1.70																				
Date	Time	Depth, TR																																	
3/20	1140	1.44																																	
3/20	1227	1.70																																	
- CL					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">7.23</td> <td style="text-align: center;">5.5</td> <td style="text-align: center;">1100</td> <td style="text-align: center;">20.3</td> </tr> </tbody> </table>	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.23	5.5	1100	20.3																						
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																
7.23	5.5	1100	20.3																																
- CL					LEGEND																														
CL					<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;"> GRAVEL</td> <td style="width: 30%;"> SAND</td> <td style="width: 30%;"> TPC TOP OF PROTECTIVE CASING</td> </tr> <tr> <td> SURFACE SEAL</td> <td> SILT</td> <td> TR TOP OF WELL RISER</td> </tr> <tr> <td> GROUT</td> <td> CLAY</td> <td> GS GROUND SURFACE</td> </tr> <tr> <td> SEAL</td> <td> NO RECOVERY</td> <td> TG TOP OF GROUT</td> </tr> <tr> <td> SANDPACK</td> <td></td> <td> TBS TOP BENTONITE SEAL</td> </tr> <tr> <td></td> <td></td> <td> TSP TOP OF SANDPACK</td> </tr> <tr> <td></td> <td></td> <td> TSC TOP OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td> BSC BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td> TD TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td> POW POINT OF WELL</td> </tr> </table>	GRAVEL	SAND	TPC TOP OF PROTECTIVE CASING	SURFACE SEAL	SILT	TR TOP OF WELL RISER	GROUT	CLAY	GS GROUND SURFACE	SEAL	NO RECOVERY	TG TOP OF GROUT	SANDPACK		TBS TOP BENTONITE SEAL			TSP TOP OF SANDPACK			TSC TOP OF SCREEN			BSC BOTTOM OF SCREEN			TD TOTAL DEPTH			POW POINT OF WELL
GRAVEL	SAND	TPC TOP OF PROTECTIVE CASING																																	
SURFACE SEAL	SILT	TR TOP OF WELL RISER																																	
GROUT	CLAY	GS GROUND SURFACE																																	
SEAL	NO RECOVERY	TG TOP OF GROUT																																	
SANDPACK		TBS TOP BENTONITE SEAL																																	
		TSP TOP OF SANDPACK																																	
		TSC TOP OF SCREEN																																	
		BSC BOTTOM OF SCREEN																																	
		TD TOTAL DEPTH																																	
		POW POINT OF WELL																																	

COMPLETION REPORT OF WELL No. MW59-3A

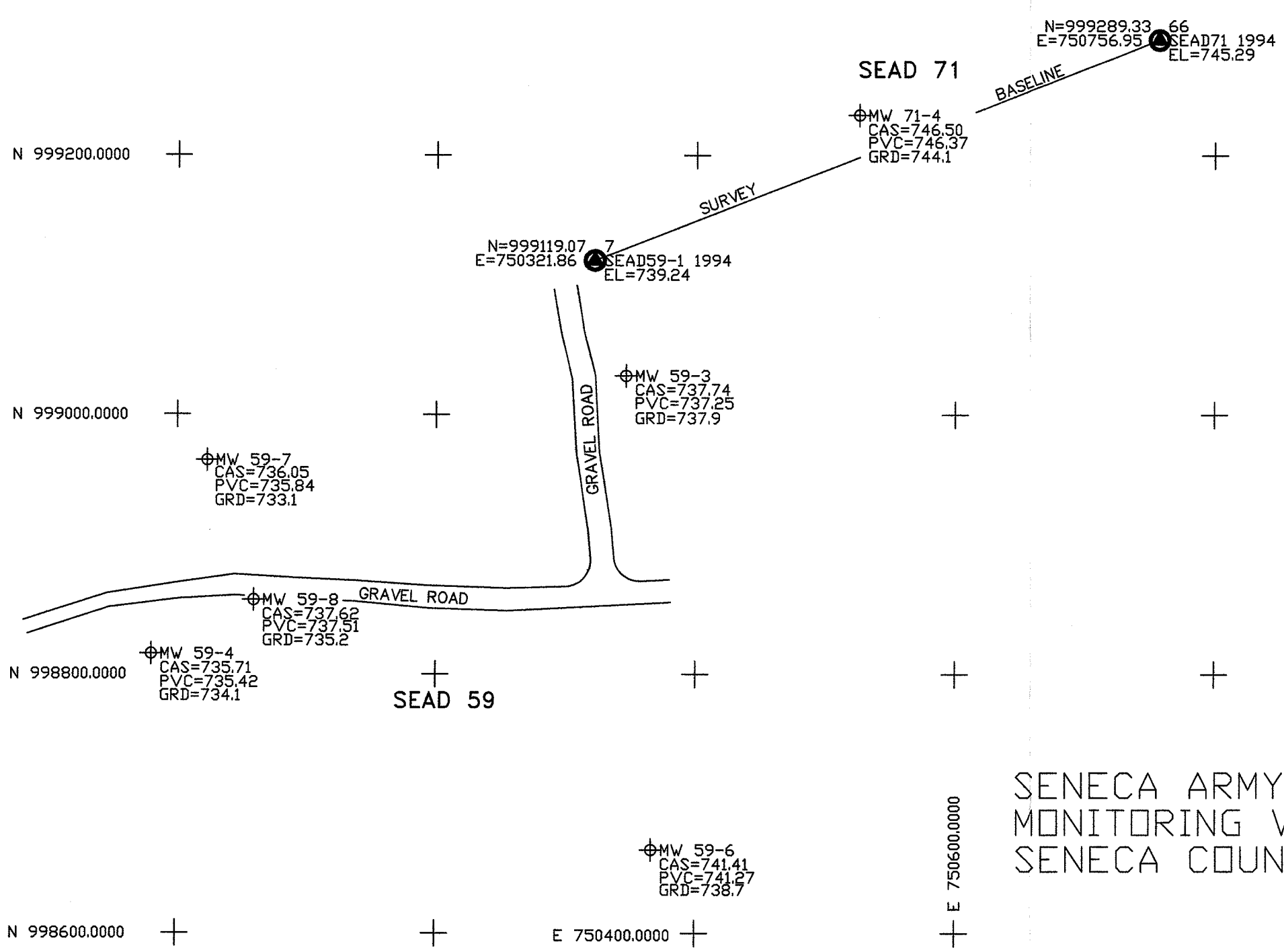
PROJECT: EIGHT MODERATELY LOW PRIORITY AOCs WELL LOCATION (N/E): 999026.3 750264.3
PROJECT LOCATION: SENECA ARMY DEPOT, ROMULUS, NY REFERENCE COORDINATE SYSTEM:
DRILLING CONTRACTOR: GROUND SURFACE ELEVATION (+): NA
DRILLING METHOD: DATUM: NAD 1983
INSTALLATION STARTED: 03/17/94 GEOLOGIST:
INSTALLATION COMPLETED: 03/17/94 CHECKED BY:

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS							
MICRO DESCRIPTION <small>(from boring log)</small>	DEPTH (ft)												
	0			TPC	NA	PROTECTIVE COVER Diameter: Type: Interval: RISER Diameter: Type: Interval: SCREEN Diameter: Type: Interval:							
				TR									
				TC									
			0.0	GS									
	5					SURFACE SEAL Type: Interval: GROUT Type: Interval: SEAL Type: Interval: SANDPACK Type: Interval:							
	8.0					WELL DEVELOPMENT DATA Date: _____ Date Time Depth, TR Method: _____ Duration: _____ Rate: _____ Final Measurements: _____ Temperature _____ Conductivity _____ pH (degrees C) _____ Turbidity (NTU) _____							
LEGEND													
	GRAVEL		SAND		GROUT		SEAL		CLAY		NO RECOVERY		TPC TOP OF PROTECTIVE CASING
	SURFACE SEAL		SILT		SANDPACK		TSP TOP OF SANDPACK		TSC TOP OF SCREEN		BSC BOTTOM OF SCREEN		TD TOTAL DEPTH
	GRAVEL		SAND		GROUT		TBS TOP BENTONITE SEAL		TSC TOP OF SCREEN		BSC BOTTOM OF SCREEN		TD TOTAL DEPTH
	SANDPACK		NO RECOVERY		TPC TOP OF PROTECTIVE CASING		TR TOP OF WELL RISER		GS GROUND SURFACE		TG TOP OF GROUT		TBS TOP BENTONITE SEAL



UNITED STATES ARMY
CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York

COMPLETION REPORT OF WELL No. MW59-3A



SENECA ARMY DEPOT SEADS 59 AND 71
MONITORING WELLS
SENECA COUNTY

ELEVATIONS

MW#	NORTHING	EASTING	GROUND	PVC	CASING
MW59-3	999030.0	750345.9	737.9	737.25	737.74
MW59-4	998815.5	749980.4	734.1	735.42	735.71
MW59-6	998664.3	750366.4	738.7	741.27	741.41
MW59-7	998964.9	750023.5	733.1	735.84	736.05
MW59-8	998857.1	750060.2	735.2	737.51	737.62
MW71-4	999231.2	750525.3	744.1	746.37	746.50

NOTES: FIELD WORK COMPLETED ON JUNE 8, 2004.
HORIZONTAL DATUM IS NAD83 PER SEADS 59-1(1994) AND 71(1994) MONUMENTS.
VERTICAL DATUM IS NAVD88 PER SEADS 59-1(1994) AND 71(1994) MONUMENTS.



RAMIE SURVEYING, P.C.
6437 COLLAMER ROAD
EAST SYRACUSE, NEW YORK 13057
PH: 315 458-8980 FAX: 315 458-8978



SENECA ARMY DEPOT
TOWN OF ROMULUS
SENECA COUNTY
STATE OF NEW YORK

**MONITORING WELL LOCATION
SEADS 59 AND 71
FOR
PARSONS ENGINEERING SCIENCE**

SCALE 1" = 100'
DATE 6/17/04
DESIGNED BY
DRAWN BY JFR
FILE NO. 04013-MW/1
SHEET 1 OF 1
JOB NO. 04.13

COMPLETION REPORT OF WELL No. MW63-1

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: **06/13/94**
 WELL INSTALLATION COMPLETED: **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**

STRATA	SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																											
MICRO DESCRIPTION (from boring log)	DEPTH (ft)		0.0	638.3	PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 4.65 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 3.95 SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 1 SANDPACK Type: #1, #3 #1: .5' #3: 5.65' Interval: 6.15																											
						1.5	636.8																									
						2.5	635.8																									
						3.6	634.7																									
						5																										
		7.5	630.8																													
		8.7	629.6																													
					WELL DEVELOPMENT DATA Date: 6/27/94 Method: BAIL/PUMP Duration: 2 DAYS Rate: .220 L/MIN Final Measurements:																											
					WATER LEVELS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>6/26</td> <td>1615</td> <td>5.98</td> </tr> <tr> <td>6/27</td> <td>1255</td> <td>8.40</td> </tr> </tbody> </table>	Date	Time	Depth, TR	6/26	1615	5.98	6/27	1255	8.40																		
Date	Time	Depth, TR																														
6/26	1615	5.98																														
6/27	1255	8.40																														
					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">7.19</td> <td style="text-align: center;">12.6</td> <td style="text-align: center;">390</td> <td style="text-align: center;">16</td> </tr> </tbody> </table>	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.19	12.6	390	16																			
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																													
7.19	12.6	390	16																													
					LEGEND <table style="width: 100%;"> <tr> <td style="width: 33%;"> GRAVEL</td> <td style="width: 33%;"> SAND</td> <td style="width: 33%;">TPC TOP OF PROTECTIVE CASING</td> </tr> <tr> <td> SURFACE SEAL</td> <td> SILT</td> <td>TR TOP OF WELL RISER</td> </tr> <tr> <td> GROUT</td> <td> CLAY</td> <td>GS GROUND SURFACE</td> </tr> <tr> <td> SEAL</td> <td> NO RECOVERY</td> <td>TBS TOP BENTONITE SEAL</td> </tr> <tr> <td> SANDPACK</td> <td></td> <td>TSP TOP OF SANDPACK</td> </tr> <tr> <td></td> <td></td> <td>TSC TOP OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>BSC BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>TD TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td>POW POINT OF WELL</td> </tr> </table>	GRAVEL	SAND	TPC TOP OF PROTECTIVE CASING	SURFACE SEAL	SILT	TR TOP OF WELL RISER	GROUT	CLAY	GS GROUND SURFACE	SEAL	NO RECOVERY	TBS TOP BENTONITE SEAL	SANDPACK		TSP TOP OF SANDPACK			TSC TOP OF SCREEN			BSC BOTTOM OF SCREEN			TD TOTAL DEPTH			POW POINT OF WELL
GRAVEL	SAND	TPC TOP OF PROTECTIVE CASING																														
SURFACE SEAL	SILT	TR TOP OF WELL RISER																														
GROUT	CLAY	GS GROUND SURFACE																														
SEAL	NO RECOVERY	TBS TOP BENTONITE SEAL																														
SANDPACK		TSP TOP OF SANDPACK																														
		TSC TOP OF SCREEN																														
		BSC BOTTOM OF SCREEN																														
		TD TOTAL DEPTH																														
		POW POINT OF WELL																														



ENGINEERING-SCIENCE, INC.

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**COMPLETION REPORT OF
 WELL No. MW63-1**

COMPLETION REPORT OF WELL No. MW63-2

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: **06/14/94**
 WELL INSTALLATION COMPLETED: **06/14/94**

WELL LOCATION (N/E): **1012979.9 741136.2**
 REFERENCE COORDINATE SYSTEM: **New York State Plane**
 GROUND SURFACE ELEVATION (ft): **630.9**
 DATUM: **NAD 1983**
 GEOLOGIST: **K. KELLY**
 CHECKED BY: **FO**

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																															
MICRO DESCRIPTION (from boring log)	DEPTH (ft)																																				
						PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 4.05 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 3.95 SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 1 SANDPACK Type: #1, #3 #1: .3" #3: 5.4' Interval: 5.7																															
	0			0.0	630.9																																
ML				1.5	629.4																																
ML				2.5	628.4																																
ML				3.0	627.9																																
ML																																					
ML																																					
ML																																					
SP																																					
ML																																					
ML																																					
SP				7.0	623.9																																
				8.1	622.8																																
	8.2																																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">WELL DEVELOPMENT DATA</th> <th colspan="3">WATER LEVELS</th> </tr> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>6/26/94</td> <td></td> <td>2.98</td> <td>6/25</td> <td>1450</td> <td>2.98</td> </tr> <tr> <td></td> <td></td> <td>8.20</td> <td>6/26</td> <td>1410</td> <td>8.20</td> </tr> </tbody> </table> <p>Method: BAIL/PUMP Duration: 2 DAYS Rate: .893 L/MIN</p> <p>Final Measurements:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td>7.02</td> <td>15.4</td> <td>600</td> <td>10</td> </tr> </tbody> </table>						WELL DEVELOPMENT DATA			WATER LEVELS			Date	Time	Depth, TR	Date	Time	Depth, TR	6/26/94		2.98	6/25	1450	2.98			8.20	6/26	1410	8.20	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.02	15.4	600	10
WELL DEVELOPMENT DATA			WATER LEVELS																																		
Date	Time	Depth, TR	Date	Time	Depth, TR																																
6/26/94		2.98	6/25	1450	2.98																																
		8.20	6/26	1410	8.20																																
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																		
7.02	15.4	600	10																																		
<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> LEGEND SURFACE SEAL GROUT SEAL SANDPACK </td> <td style="vertical-align: top;"> GRAVEL SAND SILT CLAY NO RECOVERY </td> <td style="vertical-align: top;"> TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL </td> </tr> </table>						LEGEND SURFACE SEAL GROUT SEAL SANDPACK	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL																													
LEGEND SURFACE SEAL GROUT SEAL SANDPACK	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL																																			



ENGINEERING-SCIENCE, INC.

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**COMPLETION REPORT OF
 WELL No. MW63-2**

COMPLETION REPORT OF WELL No. MW63-3

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: 06/14/94
WELL INSTALLATION COMPLETED: 06/14/94

WELL LOCATION (N/E): 1013181.9 741130.1
REFERENCE COORDINATE SYSTEM: New York State Plane
GROUND SURFACE ELEVATION (ft): 631.8
DATUM: NAD 1983
GEOLOGIST: K. KELLY
CHECKED BY: FO

STRATA	SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																													
					PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 4.05 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 3.95 SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 1 SANDPACK Type: #1, #3 #1: .4' #3: 5.4' Interval: 5.8																													
			0.0	631.8																														
ML GM ML ML			1.5	630.3																														
CL			2.5	629.3																														
SP SM			3.0	628.8																														
- SP SP			5																															
- SM			7.0	624.8																														
- -			8.1	623.7																														
8.3																																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">WELL DEVELOPMENT DATA</th> <th colspan="3">WATER LEVELS</th> </tr> <tr> <th>Date</th> <th>Method</th> <th>Rate</th> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>6/27/94</td> <td>BAIL/PUMP</td> <td>.526 L/MIN</td> <td>6/26</td> <td>1330</td> <td>4.15</td> </tr> <tr> <td></td> <td></td> <td></td> <td>6/26</td> <td>1610</td> <td>6.40</td> </tr> <tr> <td></td> <td></td> <td></td> <td>6/27</td> <td>0945</td> <td>3.42</td> </tr> </tbody> </table>					WELL DEVELOPMENT DATA			WATER LEVELS			Date	Method	Rate	Date	Time	Depth, TR	6/27/94	BAIL/PUMP	.526 L/MIN	6/26	1330	4.15				6/26	1610	6.40				6/27	0945	3.42
WELL DEVELOPMENT DATA			WATER LEVELS																															
Date	Method	Rate	Date	Time	Depth, TR																													
6/27/94	BAIL/PUMP	.526 L/MIN	6/26	1330	4.15																													
			6/26	1610	6.40																													
			6/27	0945	3.42																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td>6.89</td> <td>16.1</td> <td>2000</td> <td>20</td> </tr> </tbody> </table>					pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	6.89	16.1	2000	20																						
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																															
6.89	16.1	2000	20																															
<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> LEGEND SURFACE SEAL GROUT SEAL SANDPACK </td> <td style="vertical-align: top;"> GRAVEL SAND SILT CLAY NO RECOVERY </td> <td style="vertical-align: top;"> TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL </td> </tr> </table>					LEGEND SURFACE SEAL GROUT SEAL SANDPACK	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL																											
LEGEND SURFACE SEAL GROUT SEAL SANDPACK	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL																																



ENGINEERING-SCIENCE, INC.

UNITED STATES ARMY
CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York

COMPLETION REPORT OF
WELL No. MW63-3

COMPLETION REPORT OF WELL No. MW67-1

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: 03/30/94
 WELL INSTALLATION COMPLETED: 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

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS										
MICRO DESCRIPTION (from boring log)	DEPTH (ft)															
					TPC		PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 3.15 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 2, 4 SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE CHIPS Interval: 1.3 SANDPACK Type: #1, #3 #1: .5' #3: .8' Interval: 8.5									
	0			0.0	GS	696.7										
ML																
CL				1.5	TBS	695.2										
GW				2.8	TSP	693.9										
CL				3.7	TSC	693.0										
-							WELL DEVELOPMENT DATA Date: 5/13/94 Method: BAIL/PUMP Duration: 360 MIN Rate: .5 L/MIN Final Measurements: pH: 7.51 Temperature (degrees C): 11 Conductivity (micromhos/cm): 440 Turbidity (NTU): 1.19									
ML	5															
ML																
SM																
SM																
-							WATER LEVELS <table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>5/13</td> <td>1130</td> <td>3.93</td> </tr> <tr> <td>5/13</td> <td>1450</td> <td></td> </tr> </tbody> </table>	Date	Time	Depth, TR	5/13	1130	3.93	5/13	1450	
Date	Time	Depth, TR														
5/13	1130	3.93														
5/13	1450															
-				10.5	BSC	686.2										
-	11.3			11.3	POW	685.4										



UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York

COMPLETION REPORT OF WELL No. MW67-1

COMPLETION REPORT OF WELL No. MW67-2

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: 03/30/94
 WELL INSTALLATION COMPLETED: 03/30/94

WELL LOCATION (N/E): 1002256.6 748953.1
 REFERENCE COORDINATE SYSTEM: New York State Plane
 GROUND SURFACE ELEVATION (ft): 697.7
 DATUM: NAD 1983
 GEOLOGIST: K.KELLY
 CHECKED BY: FO

STRATA	SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																											
				TPC	PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 4.8 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 4, 1.95 SURFACE SEAL Type: CEMENT Interval: .5 GROUT Type: BENTONITE/CEMENT Interval: 1.65 SEAL Type: BENTONITE PELLETS Interval: 1 SANDPACK Type: #1, #3 Interval: 8.6 #1: .5' #3: 8.1'																											
			0.0	GS		697.7																										
ML			2.2	TBS		695.5																										
ML ML ML			3.2	TSP		694.5																										
ML CL ML			4.2	TSC	693.5																											
ML			5																													
ML ML			10																													
ML ML			10.9	BSC	686.8																											
			11.8	POW	685.9																											
					WELL DEVELOPMENT DATA Date: 5/14/94 Method: BAIL/PUMP Duration: 110 MIN Rate: Final Measurements: pH: 7.15 Temperature (degrees C): 9.0 Conductivity (micromhos/cm): 450 Turbidity (NTU): 28																											
					WATER LEVELS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>5/14</td> <td>1025</td> <td>1.89</td> </tr> <tr> <td>5/14</td> <td>1100</td> <td>2.21</td> </tr> </tbody> </table>	Date	Time	Depth, TR	5/14	1025	1.89	5/14	1100	2.21																		
Date	Time	Depth, TR																														
5/14	1025	1.89																														
5/14	1100	2.21																														
					LEGEND <table style="width: 100%;"> <tr> <td> SURFACE SEAL</td> <td> SAND</td> <td>TPC TOP OF PROTECTIVE CASING</td> </tr> <tr> <td> GROUT</td> <td> SILT</td> <td>TR TOP OF WELL RISER</td> </tr> <tr> <td> SEAL</td> <td> CLAY</td> <td>GS GROUND SURFACE</td> </tr> <tr> <td> SANDPACK</td> <td> NO RECOVERY</td> <td>TBS TOP BENTONITE SEAL</td> </tr> <tr> <td></td> <td></td> <td>TSP TOP OF SANDPACK</td> </tr> <tr> <td></td> <td></td> <td>TSC TOP OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>BSC BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>TD TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td>POW POINT OF WELL</td> </tr> </table>	SURFACE SEAL	SAND	TPC TOP OF PROTECTIVE CASING	GROUT	SILT	TR TOP OF WELL RISER	SEAL	CLAY	GS GROUND SURFACE	SANDPACK	NO RECOVERY	TBS TOP BENTONITE SEAL			TSP TOP OF SANDPACK			TSC TOP OF SCREEN			BSC BOTTOM OF SCREEN			TD TOTAL DEPTH			POW POINT OF WELL
SURFACE SEAL	SAND	TPC TOP OF PROTECTIVE CASING																														
GROUT	SILT	TR TOP OF WELL RISER																														
SEAL	CLAY	GS GROUND SURFACE																														
SANDPACK	NO RECOVERY	TBS TOP BENTONITE SEAL																														
		TSP TOP OF SANDPACK																														
		TSC TOP OF SCREEN																														
		BSC BOTTOM OF SCREEN																														
		TD TOTAL DEPTH																														
		POW POINT OF WELL																														



ENGINEERING-SCIENCE, INC.

UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York

**COMPLETION REPORT OF
 WELL No. MW67-2**

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**

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
MICRO DESCRIPTION (from boring log)	DEPTH (ft)					
						PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 3.15 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 2, 4 SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE CHIPS Interval: 1.3 SANDPACK Type: #1, #3 Interval: 8.5 #1: .5' #3: .8'
ML	0					
ML						
ML			1.5	TBS	693.5	
-						
ML			2.8	TSP	692.2	
ML			3.4	TSC	691.6	
-						
ML						
ML						
-	5					
-						
SM						
-						
ML						
-						
-						
-						
-						
-						
-	10		10.2	BSC	684.8	
-						
-						
-						
-						
-						
-	11.5		11.3	POW	683.7	
-						
-						

WELL DEVELOPMENT DATA		WATER LEVELS					
Date:	5/14/94	Date	5/13	Time	1415	Depth, TR	3.70
Method:	BAIL/PUMP		5/14		1330		3.80
Duration:	3 DAYS						
Rate:							
Final Measurements:							
pH	7.14	Temperature (degrees C)	8.5	Conductivity (micromhos/cm)	370	Turbidity (NTU)	4.92

LEGEND	
	SURFACE SEAL
	GROUT
	SEAL
	SANDPACK
	GRAVEL
	SAND
	SILT
	CLAY
	NO RECOVERY
TPC	TOP OF PROTECTIVE CASING
TR	TOP OF WELL RISER
GS	GROUND SURFACE
TBS	TOP BENTONITE SEAL
TSP	TOP OF SANDPACK
TSC	TOP OF SCREEN
BSC	BOTTOM OF SCREEN
TD	TOTAL DEPTH
POW	POINT OF WELL



ENGINEERING-SCIENCE, INC.

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

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

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 INSTALLATION COMPLETED: **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**

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)		ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																									
MICRO DESCRIPTION (from boring log)	DEPTH (ft)																																															
							TPC	PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5																																								
							TR																																									
							TC																																									
	0			0.0	GS	636.5																																										
ML							TBS	RISER Diameter: 2 Type: SCH. 40-PVC Interval: 5.2																																								
ML				1.5		635.0																																										
ML							TSP	SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 4, .9																																								
-				2.5		634.0																																										
CL							TSC	SURFACE SEAL Type: CEMENT Interval: 1.5																																								
ML				3.7		632.8																																										
-								GROUT Type: N/A Interval: N/A																																								
ML	5																																															
-								SEAL Type: BENTONITE PELLETS Interval: 1																																								
ML																																																
-								SANDPACK Type: #1, #3 Interval: 7.95 #1: .8" #3: 7.15"																																								
ML				9.6	BSC	626.9																																										
-								WELL DEVELOPMENT DATA Date: 5/17/94 Method: BAIL/PUMP Duration: 95 MIN Rate:																																								
-	10			10.4	POW	626.1																																										
								<table border="0" style="width: 100%;"> <tr> <th colspan="2" style="text-align: left;">WELL DEVELOPMENT DATA</th> <th colspan="3" style="text-align: left;">WATER LEVELS</th> </tr> <tr> <td>Date:</td> <td>5/17/94</td> <td>Date</td> <td>Time</td> <td>Depth, TR</td> </tr> <tr> <td>Method:</td> <td>BAIL/PUMP</td> <td>5/17</td> <td>1020</td> <td>2.51</td> </tr> <tr> <td>Duration:</td> <td>95 MIN</td> <td>5/17</td> <td>1142</td> <td>4.42</td> </tr> <tr> <td>Rate:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">Final Measurements:</td> </tr> <tr> <td>pH</td> <td>Temperature (degrees C)</td> <td>Conductivity (micromhos/cm)</td> <td colspan="2">Turbidity (NTU)</td> </tr> <tr> <td style="text-align: center;">6.8</td> <td style="text-align: center;">7.8</td> <td style="text-align: center;">470</td> <td colspan="2" style="text-align: center;">15.3</td> </tr> </table>	WELL DEVELOPMENT DATA		WATER LEVELS			Date:	5/17/94	Date	Time	Depth, TR	Method:	BAIL/PUMP	5/17	1020	2.51	Duration:	95 MIN	5/17	1142	4.42	Rate:					Final Measurements:					pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)		6.8	7.8	470	15.3	
WELL DEVELOPMENT DATA		WATER LEVELS																																														
Date:	5/17/94	Date	Time	Depth, TR																																												
Method:	BAIL/PUMP	5/17	1020	2.51																																												
Duration:	95 MIN	5/17	1142	4.42																																												
Rate:																																																
Final Measurements:																																																
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																													
6.8	7.8	470	15.3																																													
								LEGEND <table border="0" style="width: 100%;"> <tr> <td> GRAVEL</td> <td>TPC</td> <td>TOP OF PROTECTIVE CASING</td> </tr> <tr> <td> SURFACE SEAL</td> <td>TR</td> <td>TOP OF WELL RISER</td> </tr> <tr> <td> GROUT</td> <td>GS</td> <td>GROUND SURFACE</td> </tr> <tr> <td> SEAL</td> <td>TBS</td> <td>TOP BENTONITE SEAL</td> </tr> <tr> <td> SANDPACK</td> <td>TSP</td> <td>TOP OF SANDPACK</td> </tr> <tr> <td></td> <td>TSC</td> <td>TOP OF SCREEN</td> </tr> <tr> <td></td> <td>BSC</td> <td>BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td>TD</td> <td>TOTAL DEPTH</td> </tr> <tr> <td></td> <td>POW</td> <td>POINT OF WELL</td> </tr> <tr> <td> NO RECOVERY</td> <td></td> <td></td> </tr> </table>	GRAVEL	TPC	TOP OF PROTECTIVE CASING	SURFACE SEAL	TR	TOP OF WELL RISER	GROUT	GS	GROUND SURFACE	SEAL	TBS	TOP BENTONITE SEAL	SANDPACK	TSP	TOP OF SANDPACK		TSC	TOP OF SCREEN		BSC	BOTTOM OF SCREEN		TD	TOTAL DEPTH		POW	POINT OF WELL	NO RECOVERY												
GRAVEL	TPC	TOP OF PROTECTIVE CASING																																														
SURFACE SEAL	TR	TOP OF WELL RISER																																														
GROUT	GS	GROUND SURFACE																																														
SEAL	TBS	TOP BENTONITE SEAL																																														
SANDPACK	TSP	TOP OF SANDPACK																																														
	TSC	TOP OF SCREEN																																														
	BSC	BOTTOM OF SCREEN																																														
	TD	TOTAL DEPTH																																														
	POW	POINT OF WELL																																														
NO RECOVERY																																																



ENGINEERING-SCIENCE, INC.

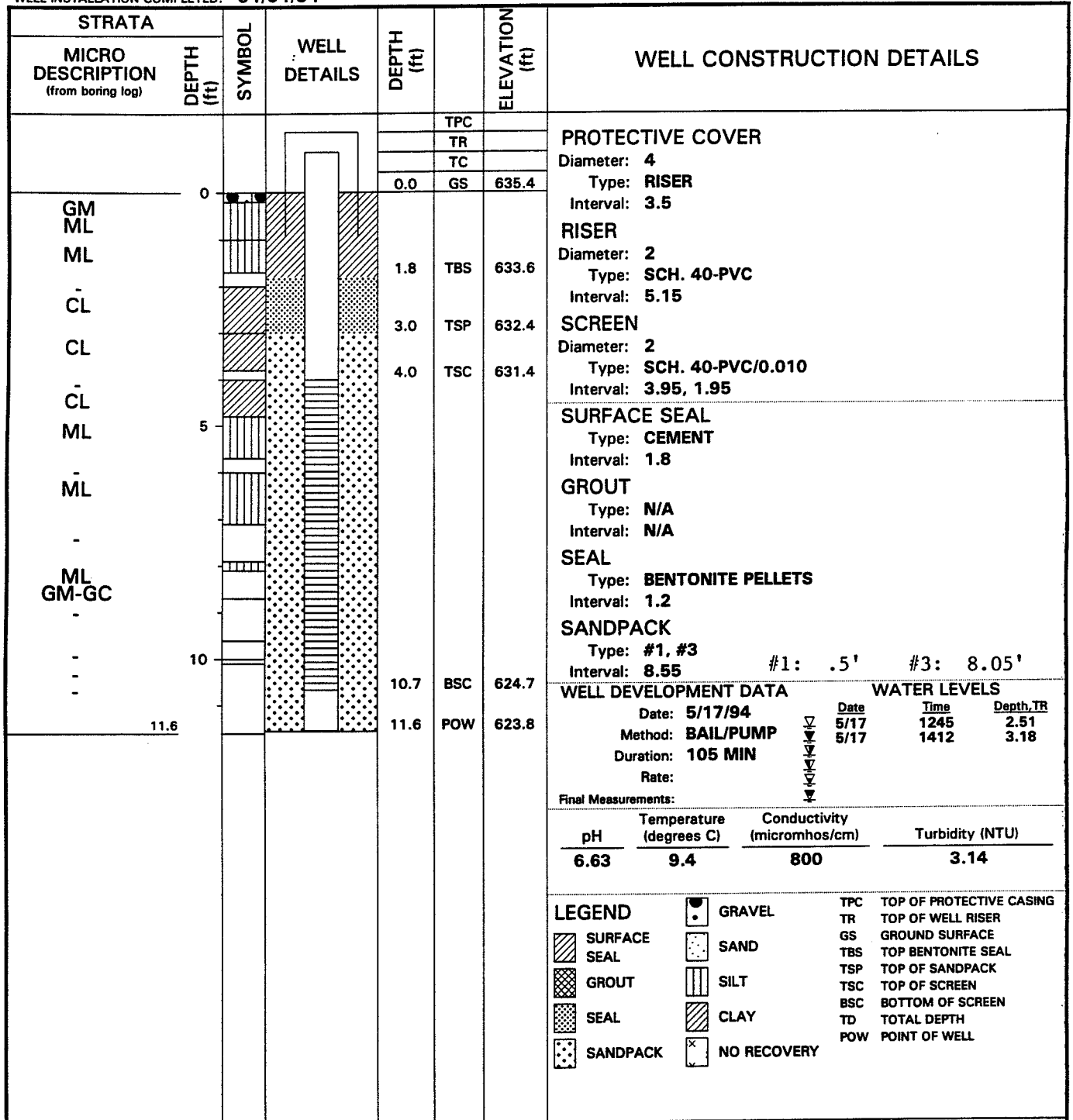
**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

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

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 INSTALLATION COMPLETED: **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**
 CHECKED BY: **FO**



ENGINEERING-SCIENCE, INC.

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**COMPLETION REPORT OF
 WELL No. MW70-2**

COMPLETION REPORT OF WELL No. MW70-3

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: 04/05/94
 WELL INSTALLATION COMPLETED: 04/05/94

WELL LOCATION (N/E): 1007173.3 740552.3
 REFERENCE COORDINATE SYSTEM: New York State Plane
 GROUND SURFACE ELEVATION (ft): 636.3
 DATUM: NAD 1983
 GEOLOGIST: K. KELLY
 CHECKED BY: FO

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																																					
MICRO DESCRIPTION (from boring log)	DEPTH (ft)																																																										
					TPC	PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 5.15 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 3.95 SURFACE SEAL Type: CEMENT Interval: 2 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 1.3 SANDPACK Type: #1, #3 Interval: 6.1 #1: .5' #3: 5.6'																																																					
	0			0.0	GS																																																						
ML				2.0	TBS																																																						
ML CL				3.3	TSP																																																						
CL CL CL CL CL CL CL SM	5			4.3	TSC																																																						
				8.3	BSC	WELL DEVELOPMENT DATA Date: 5/17/94 Method: BAIL/PUMP Duration: 80 MIN Rate: Final Measurements: pH: 6.83 Temperature (degrees C): 8.6 Conductivity (micromhos/cm): 670 Turbidity (NTU): 15.6																																																					
	9.4			9.4	POW																																																						
						WATER LEVELS <table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>5/17</td> <td>1510</td> <td>3.07</td> </tr> <tr> <td>5/17</td> <td>1615</td> <td>4.65</td> </tr> </tbody> </table>	Date	Time	Depth, TR	5/17	1510	3.07	5/17	1615	4.65																																												
Date	Time	Depth, TR																																																									
5/17	1510	3.07																																																									
5/17	1615	4.65																																																									
LEGEND <table border="0"> <tr> <td></td> <td>SURFACE SEAL</td> <td></td> <td>GRAVEL</td> <td>TPC</td> <td>TOP OF PROTECTIVE CASING</td> </tr> <tr> <td></td> <td>GROUT</td> <td></td> <td>SAND</td> <td>TR</td> <td>TOP OF WELL RISER</td> </tr> <tr> <td></td> <td>SEAL</td> <td></td> <td>SILT</td> <td>GS</td> <td>GROUND SURFACE</td> </tr> <tr> <td></td> <td>SANDPACK</td> <td></td> <td>CLAY</td> <td>TBS</td> <td>TOP BENTONITE SEAL</td> </tr> <tr> <td></td> <td></td> <td></td> <td>NO RECOVERY</td> <td>TSP</td> <td>TOP OF SANDPACK</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>TSC</td> <td>TOP OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>BSC</td> <td>BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>TD</td> <td>TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>POW</td> <td>POINT OF WELL</td> </tr> </table>							SURFACE SEAL		GRAVEL	TPC	TOP OF PROTECTIVE CASING		GROUT		SAND	TR	TOP OF WELL RISER		SEAL		SILT	GS	GROUND SURFACE		SANDPACK		CLAY	TBS	TOP BENTONITE SEAL				NO RECOVERY	TSP	TOP OF SANDPACK					TSC	TOP OF SCREEN					BSC	BOTTOM OF SCREEN					TD	TOTAL DEPTH					POW	POINT OF WELL
	SURFACE SEAL		GRAVEL	TPC	TOP OF PROTECTIVE CASING																																																						
	GROUT		SAND	TR	TOP OF WELL RISER																																																						
	SEAL		SILT	GS	GROUND SURFACE																																																						
	SANDPACK		CLAY	TBS	TOP BENTONITE SEAL																																																						
			NO RECOVERY	TSP	TOP OF SANDPACK																																																						
				TSC	TOP OF SCREEN																																																						
				BSC	BOTTOM OF SCREEN																																																						
				TD	TOTAL DEPTH																																																						
				POW	POINT OF WELL																																																						



ENGINEERING-SCIENCE, INC.

UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York

COMPLETION REPORT OF
 WELL No. MW70-3

COMPLETION REPORT OF WELL No. MW70-4

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 INSTALLATION COMPLETED: **05/11/94**

WELL LOCATION (N/E): **1007055.2 740563.3**
 REFERENCE COORDINATE SYSTEM: **New York State Plane**
 GROUND SURFACE ELEVATION (ft): **636.3**
 DATUM: **NAD 1983**
 GEOLOGIST: **F. O'LOUHGLIN**
 CHECKED BY: **FO**

STRATA		SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																								
MICRO DESCRIPTION (from boring log)	DEPTH (ft)																																													
						PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 4.25 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 4.9 SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 1 SANDPACK Type: #1, #3 #1: .55' #3: 7.05' Interval: 7.6																																								
	0			0.0	636.3																																									
ML				1.5	634.8																																									
CL				2.5	633.8																																									
-				3.6	632.7																																									
ML																																														
-																																														
SC																																														
-																																														
ML																																														
SM																																														
SM																																														
-																																														
SM																																														
-																																														
SM																																														
-																																														
	10.1			10.1	626.2																																									
	10																																													
						WELL DEVELOPMENT DATA Date: 5/23/94 Method: BAIL/PUMP Duration: 6 DAYS Rate: .230 L/MIN Final Measurements: pH: 6.93 Temperature (degrees C): 10.1 Conductivity (micromhos/cm): 690 Turbidity (NTU): 3.59																																								
						WATER LEVELS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>5/18</td> <td>0825</td> <td>2.22</td> </tr> <tr> <td>5/23</td> <td>2.42</td> <td>2.42</td> </tr> </tbody> </table>	Date	Time	Depth, TR	5/18	0825	2.22	5/23	2.42	2.42																															
Date	Time	Depth, TR																																												
5/18	0825	2.22																																												
5/23	2.42	2.42																																												
						LEGEND <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <table border="0"> <tr><td></td><td>SURFACE SEAL</td></tr> <tr><td></td><td>GROUT</td></tr> <tr><td></td><td>SEAL</td></tr> <tr><td></td><td>SANDPACK</td></tr> </table> </td> <td style="width: 50%; vertical-align: top;"> <table border="0"> <tr><td></td><td>GRAVEL</td></tr> <tr><td></td><td>SAND</td></tr> <tr><td></td><td>SILT</td></tr> <tr><td></td><td>CLAY</td></tr> <tr><td></td><td>NO RECOVERY</td></tr> </table> </td> </tr> <tr> <td style="vertical-align: top;"> <table border="0"> <tr><td>TPC</td><td>TOP OF PROTECTIVE CASING</td></tr> <tr><td>TR</td><td>TOP OF WELL RISER</td></tr> <tr><td>GS</td><td>GROUND SURFACE</td></tr> <tr><td>TBS</td><td>TOP BENTONITE SEAL</td></tr> <tr><td>TSP</td><td>TOP OF SANDPACK</td></tr> <tr><td>TSC</td><td>TOP OF SCREEN</td></tr> <tr><td>BSC</td><td>BOTTOM OF SCREEN</td></tr> <tr><td>TD</td><td>TOTAL DEPTH</td></tr> <tr><td>POW</td><td>POINT OF WELL</td></tr> </table> </td> <td></td> </tr> </table>	<table border="0"> <tr><td></td><td>SURFACE SEAL</td></tr> <tr><td></td><td>GROUT</td></tr> <tr><td></td><td>SEAL</td></tr> <tr><td></td><td>SANDPACK</td></tr> </table>		SURFACE SEAL		GROUT		SEAL		SANDPACK	<table border="0"> <tr><td></td><td>GRAVEL</td></tr> <tr><td></td><td>SAND</td></tr> <tr><td></td><td>SILT</td></tr> <tr><td></td><td>CLAY</td></tr> <tr><td></td><td>NO RECOVERY</td></tr> </table>		GRAVEL		SAND		SILT		CLAY		NO RECOVERY	<table border="0"> <tr><td>TPC</td><td>TOP OF PROTECTIVE CASING</td></tr> <tr><td>TR</td><td>TOP OF WELL RISER</td></tr> <tr><td>GS</td><td>GROUND SURFACE</td></tr> <tr><td>TBS</td><td>TOP BENTONITE SEAL</td></tr> <tr><td>TSP</td><td>TOP OF SANDPACK</td></tr> <tr><td>TSC</td><td>TOP OF SCREEN</td></tr> <tr><td>BSC</td><td>BOTTOM OF SCREEN</td></tr> <tr><td>TD</td><td>TOTAL DEPTH</td></tr> <tr><td>POW</td><td>POINT OF WELL</td></tr> </table>	TPC	TOP OF PROTECTIVE CASING	TR	TOP OF WELL RISER	GS	GROUND SURFACE	TBS	TOP BENTONITE SEAL	TSP	TOP OF SANDPACK	TSC	TOP OF SCREEN	BSC	BOTTOM OF SCREEN	TD	TOTAL DEPTH	POW	POINT OF WELL	
<table border="0"> <tr><td></td><td>SURFACE SEAL</td></tr> <tr><td></td><td>GROUT</td></tr> <tr><td></td><td>SEAL</td></tr> <tr><td></td><td>SANDPACK</td></tr> </table>		SURFACE SEAL		GROUT		SEAL		SANDPACK	<table border="0"> <tr><td></td><td>GRAVEL</td></tr> <tr><td></td><td>SAND</td></tr> <tr><td></td><td>SILT</td></tr> <tr><td></td><td>CLAY</td></tr> <tr><td></td><td>NO RECOVERY</td></tr> </table>		GRAVEL		SAND		SILT		CLAY		NO RECOVERY																											
	SURFACE SEAL																																													
	GROUT																																													
	SEAL																																													
	SANDPACK																																													
	GRAVEL																																													
	SAND																																													
	SILT																																													
	CLAY																																													
	NO RECOVERY																																													
<table border="0"> <tr><td>TPC</td><td>TOP OF PROTECTIVE CASING</td></tr> <tr><td>TR</td><td>TOP OF WELL RISER</td></tr> <tr><td>GS</td><td>GROUND SURFACE</td></tr> <tr><td>TBS</td><td>TOP BENTONITE SEAL</td></tr> <tr><td>TSP</td><td>TOP OF SANDPACK</td></tr> <tr><td>TSC</td><td>TOP OF SCREEN</td></tr> <tr><td>BSC</td><td>BOTTOM OF SCREEN</td></tr> <tr><td>TD</td><td>TOTAL DEPTH</td></tr> <tr><td>POW</td><td>POINT OF WELL</td></tr> </table>	TPC	TOP OF PROTECTIVE CASING	TR	TOP OF WELL RISER	GS	GROUND SURFACE	TBS	TOP BENTONITE SEAL	TSP	TOP OF SANDPACK	TSC	TOP OF SCREEN	BSC	BOTTOM OF SCREEN	TD	TOTAL DEPTH	POW	POINT OF WELL																												
TPC	TOP OF PROTECTIVE CASING																																													
TR	TOP OF WELL RISER																																													
GS	GROUND SURFACE																																													
TBS	TOP BENTONITE SEAL																																													
TSP	TOP OF SANDPACK																																													
TSC	TOP OF SCREEN																																													
BSC	BOTTOM OF SCREEN																																													
TD	TOTAL DEPTH																																													
POW	POINT OF WELL																																													



**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

COMPLETION REPORT OF WELL No. MW70-4

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 INSTALLATION COMPLETED: **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**

STRATA	SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS
				TPC	PROTECTIVE COVER Diameter: .7 Type: ROADWAY BOX Interval: 1
				TR	
				TC	
			0.0	GS	
ML			1.5	TBS	745.6
CL			3.0	TSP	744.1
CL			4.3	TSC	742.8
			5		
CL			8.3	BSC	738.8
CL			9.4	POW	737.7
					SURFACE SEAL Type: CEMENT Interval: 1.5 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 1 SANDPACK Type: #1, #3 Interval: 6.4 #1: .5' #3: 5.9'
			WELL DEVELOPMENT DATA		WATER LEVELS
			Date: 3/16/94	Date: 3/16	Time: 1530
			Method: BAIL		Depth, TR: 14.48
			Duration: 85 MIN		6.00
			Rate: 1.4 L/MIN		
Final Measurements:					
	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	
	6.85	5.5	500	22.4	
LEGEND					
	SURFACE SEAL		SAND	TPC	TOP OF PROTECTIVE CASING
	GROUT		SILT	TR	TOP OF WELL RISER
	SEAL		CLAY	GS	GROUND SURFACE
	SANDPACK		NO RECOVERY	TBS	TOP BENTONITE SEAL
				TSP	TOP OF SANDPACK
				TSC	TOP OF SCREEN
				BSC	BOTTOM OF SCREEN
				TD	TOTAL DEPTH
				POW	POINT OF WELL



ENGINEERING-SCIENCE, INC.

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

**COMPLETION REPORT OF
 WELL No. MW71-1**

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 INSTALLATION COMPLETED: **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**

STRATA	SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																			
				TPC	PROTECTIVE COVER Diameter: 8 Type: ROADWAY BOX Interval: 1 RISER Diameter: 2 Type: SCH. 40-PVC Interval: 3.2 SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 2 SURFACE SEAL Type: CEMENT Interval: 1 GROUT Type: BENTONITE/CEMENT Interval: 1.3 SEAL Type: BENTONITE PELLETS Interval: 1 SANDPACK Type: #1, #3 Interval: 3.8 #1: .5' #3: 3.3'																			
			0.0	GS		747.3																		
- GM CL	-		1.8	TBS		745.5																		
GM CCL CCL CL CL	-		2.8	TSP		744.5																		
			3.8	TSC	743.5																			
			5.8	BSC	741.5																			
- ML	-		6.6	POW	740.7																			
			6.8																					
<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">WELL DEVELOPMENT DATA</td> <td style="width: 50%;">WATER LEVELS</td> </tr> <tr> <td>Date: 4/28/94</td> <td>Date: 4/5 Time: 1000 Depth: 4.85</td> </tr> <tr> <td>Method: BAIL/PUMP</td> <td>Date: 4/28 Time: 0845 Depth: 5.59</td> </tr> <tr> <td>Duration: 24 DAYS</td> <td></td> </tr> <tr> <td>Rate: .333 L/MIN</td> <td></td> </tr> <tr> <td>Final Measurements:</td> <td></td> </tr> <tr> <td style="text-align: center;">pH</td> <td style="text-align: center;">Temperature (degrees C)</td> <td style="text-align: center;">Conductivity (micromhos/cm)</td> <td style="text-align: center;">Turbidity (NTU)</td> </tr> <tr> <td style="text-align: center;">7.19</td> <td style="text-align: center;">6.8</td> <td style="text-align: center;">435</td> <td style="text-align: center;">57.6</td> </tr> </table>					WELL DEVELOPMENT DATA	WATER LEVELS	Date: 4/28/94	Date: 4/5 Time: 1000 Depth: 4.85	Method: BAIL/PUMP	Date: 4/28 Time: 0845 Depth: 5.59	Duration: 24 DAYS		Rate: .333 L/MIN		Final Measurements:		pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.19	6.8	435	57.6
WELL DEVELOPMENT DATA	WATER LEVELS																							
Date: 4/28/94	Date: 4/5 Time: 1000 Depth: 4.85																							
Method: BAIL/PUMP	Date: 4/28 Time: 0845 Depth: 5.59																							
Duration: 24 DAYS																								
Rate: .333 L/MIN																								
Final Measurements:																								
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																					
7.19	6.8	435	57.6																					
<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">LEGEND</td> <td style="width: 30%;"> GRAVEL SAND SILT CLAY NO RECOVERY </td> <td style="width: 40%;"> TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL </td> </tr> <tr> <td> SURFACE SEAL GROUT SEAL SANDPACK </td> <td> GRAVEL SAND SILT CLAY NO RECOVERY </td> <td></td> </tr> </table>						LEGEND	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL	SURFACE SEAL GROUT SEAL SANDPACK	GRAVEL SAND SILT CLAY NO RECOVERY														
LEGEND	GRAVEL SAND SILT CLAY NO RECOVERY	TPC TOP OF PROTECTIVE CASING TR TOP OF WELL RISER GS GROUND SURFACE TBS TOP BENTONITE SEAL TSP TOP OF SANDPACK TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH POW POINT OF WELL																						
SURFACE SEAL GROUT SEAL SANDPACK	GRAVEL SAND SILT CLAY NO RECOVERY																							

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 INSTALLATION COMPLETED: **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**
 CHECKED BY: **FO**

STRATA	SYMBOL	WELL DETAILS	DEPTH (ft)	ELEVATION (ft)	WELL CONSTRUCTION DETAILS																																			
					PROTECTIVE COVER Diameter: 4 Type: RISER Interval: 3.5																																			
			0.0	744.5																																				
ML			1.7	742.8	RISER Diameter: 2 Type: SCH. 40-PVC Interval: 4.75																																			
ML			2.7	741.8																																				
ML			3.6	741.0	SCREEN Diameter: 2 Type: SCH. 40-PVC/0.010 Interval: 1.95																																			
ML			5.5	739.0																																				
GM-GC			6.4	738.2	SURFACE SEAL Type: CEMENT Interval: 1.7 GROUT Type: N/A Interval: N/A SEAL Type: BENTONITE PELLETS Interval: 1 SANDPACK Type: #1, #3 #1: .5' #3: 3.15' Interval: 3.65																																			
GM-GC																																								
					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">WELL DEVELOPMENT DATA</th> <th colspan="3">WATER LEVELS</th> </tr> <tr> <th>Date</th> <th>Method</th> <th>Date</th> <th>Time</th> <th>Depth, TR</th> </tr> </thead> <tbody> <tr> <td>4/28/94</td> <td>BAIL/PUMP</td> <td>4/5</td> <td>0830</td> <td>6.43</td> </tr> <tr> <td></td> <td></td> <td>4/14</td> <td>1603</td> <td>5.46</td> </tr> <tr> <td></td> <td></td> <td>4/28</td> <td>0955</td> <td>6.16</td> </tr> <tr> <td colspan="2">Duration: 24 DAYS</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2">Rate: .375 L/MIN</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	WELL DEVELOPMENT DATA		WATER LEVELS			Date	Method	Date	Time	Depth, TR	4/28/94	BAIL/PUMP	4/5	0830	6.43			4/14	1603	5.46			4/28	0955	6.16	Duration: 24 DAYS					Rate: .375 L/MIN				
WELL DEVELOPMENT DATA		WATER LEVELS																																						
Date	Method	Date	Time	Depth, TR																																				
4/28/94	BAIL/PUMP	4/5	0830	6.43																																				
		4/14	1603	5.46																																				
		4/28	0955	6.16																																				
Duration: 24 DAYS																																								
Rate: .375 L/MIN																																								
					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>pH</th> <th>Temperature (degrees C)</th> <th>Conductivity (micromhos/cm)</th> <th>Turbidity (NTU)</th> </tr> </thead> <tbody> <tr> <td>7.05</td> <td>70</td> <td>475</td> <td>4.38</td> </tr> </tbody> </table>	pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)	7.05	70	475	4.38																											
pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)																																					
7.05	70	475	4.38																																					
					LEGEND <table style="width: 100%;"> <tr> <td> SURFACE SEAL</td> <td> GRAVEL</td> <td>TPC TOP OF PROTECTIVE CASING</td> </tr> <tr> <td> GROUT</td> <td> SAND</td> <td>TR TOP OF WELL RISER</td> </tr> <tr> <td> SEAL</td> <td> SILT</td> <td>GS GROUND SURFACE</td> </tr> <tr> <td> SANDPACK</td> <td> CLAY</td> <td>TBS TOP BENTONITE SEAL</td> </tr> <tr> <td></td> <td> NO RECOVERY</td> <td>TSP TOP OF SANDPACK</td> </tr> <tr> <td></td> <td></td> <td>TSC TOP OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>BSC BOTTOM OF SCREEN</td> </tr> <tr> <td></td> <td></td> <td>TD TOTAL DEPTH</td> </tr> <tr> <td></td> <td></td> <td>POW POINT OF WELL</td> </tr> </table>	SURFACE SEAL	GRAVEL	TPC TOP OF PROTECTIVE CASING	GROUT	SAND	TR TOP OF WELL RISER	SEAL	SILT	GS GROUND SURFACE	SANDPACK	CLAY	TBS TOP BENTONITE SEAL		NO RECOVERY	TSP TOP OF SANDPACK			TSC TOP OF SCREEN			BSC BOTTOM OF SCREEN			TD TOTAL DEPTH			POW POINT OF WELL								
SURFACE SEAL	GRAVEL	TPC TOP OF PROTECTIVE CASING																																						
GROUT	SAND	TR TOP OF WELL RISER																																						
SEAL	SILT	GS GROUND SURFACE																																						
SANDPACK	CLAY	TBS TOP BENTONITE SEAL																																						
	NO RECOVERY	TSP TOP OF SANDPACK																																						
		TSC TOP OF SCREEN																																						
		BSC BOTTOM OF SCREEN																																						
		TD TOTAL DEPTH																																						
		POW POINT OF WELL																																						



ENGINEERING-SCIENCE, INC.

**UNITED STATES ARMY
 CORPS OF ENGINEERS
 Seneca Army Depot
 Romulus, New York**

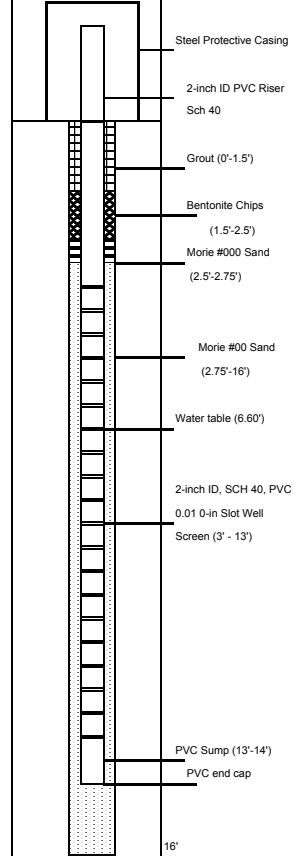
**COMPLETION REPORT OF
 WELL No. MW71-3**

Contractor: SJB					PARSONS DRILLING RECORD					BORING/ WELL NO. MW-119-1	
Driller: Walt Ketter					PROJECT NAME: Seneca Army Depot-SEAD 119					Location Description:	
Inspector: Ed Ashton					PROJECT NUMBER: 739855.01002					Former Small Arms Range	
Rig Type: ATV-CME-850										Near Lake Shore Housing	
GROUNDWATER OBSERVATIONS					Weather: Sunny - 70°F					Location Plan	
Water Level (bgs)	17'									↑ N	
Date	8/8/02									See Site Plan	
Time	0953										
Meas. From	TOC										
Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL					SCHEMATIC	COMMENTS
+3											
+2											
+1											
0											
1		4	50	NA	(0'-2'): Brown, silt with fine sand, trace fine sand, roots, dry. (SM)					<p>Steel Protective Casing</p> <p>2-inch ID PVC Riser Sch 40</p> <p>Grout (0'-1.5')</p> <p>Bentonite Chips (1.5'-2.5')</p> <p>Morie # 000 Sand (2.5'-2.75')</p> <p>Morie # 00 Sand (2.75'-20')</p> <p>2-inch ID, SCH 40, PVC 0.010-in Slot Well Screen (3' - 18')</p> <p>Water table (17')</p>	
2		6			(2'-4'): Brown, silt with fine sand, fine-medium gravel, dry. (SM)						
3		7									
4		9									
5		23	100	NA							
6		15									
7		19									
8		23									
9		19	50	NA	(4'-6'): Brown, silt with fine sand, trace fine gravel, black shale fragments, di (ML/SM)-Till						
10		28									
11		34									
12		36									
13		31	10	NA	(6'-8'): Same As Above. (ML/SM)- Til						
14		35									
15		41									
16		47									
17		21	10	NA	(8'-8.9'): Same As Above. (ML/SM)- Til Refusal at 8.9 feet. Drilled to 10 feet with HSA:						
18		50/4									
19											
20		50/4	10	NA	(10'-10.4'): Same As Above. (ML/SM)- Til Refusal at 10.4 feet. Drilled to 12 feet with HSA:						
21											
22											
23		50/1	0	NA	(12'-12.1'): No recovery Refusal at 12.1 feet. Drilled to 14 feet with HSA:						
24											
25											
26		50/1	0	NA	(14'-14.1'): No recovery Refusal at 14.1 feet. Drilled to 16 feet with HSA:						
27											
28											
29		50/0	0	NA	No recovery Refusal at 16 feet. Drilled to 20 feet with HSA:						
30											
31											
32											
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											
61											
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											
81											
82											
83											
84											
85											
86											
87											
88											
89											
90											
91											
92											
93											
94											
95											
96											
97											
98											
99											
100											

Contractor: SJB					PARSONS DRILLING RECORD					BORING/ WELL NO. MW-119-2	
Driller: Walt Ketter					PROJECT NAME: Seneca Army Depot-SEAD 119					Location Description:	
Inspector: Ed Ashton					PROJECT NUMBER: 739855.01002					Former Small Arms Range	
Rig Type: ATV-CME-850										Near Lake Shore Housing	
GROUNDWATER OBSERVATIONS					Weather: Sunny - 70°F					Location Plan	
Water Level (bgs)	8.20'									See Site Plan	
Date	8/8/02									↑ N	
Time	0830										
Meas. From	TOC										
Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL					SCHMATIC	COMMENTS
+3											
+2											
+1											
0											
1		5	50	NA	(0'-2'): Brown, silt with fine sand, roots, trace fine gravel, dry. (SM)						
2		7									
3		11									
4		11									
5		15	100	NA	(2'-4'): Brown, silt with trace-fine sand, fragments of black shale, dry. (ML/SM)-Till						
6		17									
7		19									
8		25									
9		18	100	NA	(4'-6'): Brown, silt with trace fine sand, fine-medium gravel, fragments of black shale, dry. (ML/SM)-Till						
10		21									
11		18									
12		22									
13		50/4	5	NA	(6'-6.4'): Brown, silt with trace clay, black shale, dry. (ML/SM)- T Refusal at 6.4 feet. Drilled to 8 feet with HSA:						
14											
15		10	80	NA	(8'-10'): Brown, silt with trace clay, black shale, dry to moist. (ML/SM)-T						
16		27									
17		34									
18		47									
19		13	100	NA	(10'-12'): Same As Above. (ML/SM)-Til						
20		24									
21		44									
22		45									
23		50/3	5	NA	(12'-12.3'): Same As Above. (ML/SM)-Til Refusal at 12.3 feet. Drilled to 14 feet with HSA:						
24											
25		38	50	NA	(14'-15.7'): Brown to grey, silt with trace clay, black shale, dry to moist. (ML/SM)-1 Refusal at 15.7 feet. Drilled to 20 feet with HSA:						
26		35									
27		27									
28		50/2									
29											
30											
31											
32											
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											
61											
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											
81											
82											
83											
84											
85											
86											
87											
88											
89											
90											
91											
92											
93											
94											
95											
96											
97											
98											
99											
100											

Contractor: SJB Driller: Walt Ketter Inspector: Ed Ashton Rig Type: ATV-CME-850					PARSONS					Sheet <u>2</u> of <u>2</u>		
					DRILLING RECORD					BORING/		WELL NO. MW-119-2
					PROJECT NAME: Seneca Army Depot-SEAD 119					Location Description:		
PROJECT NUMBER: 739855.01002					Former Small Arms Range				Near Lake Shore Housing			
GROUNDWATER OBSERVATIONS					Weather: Sunny - 70°F					Location Plan		
Water Level (bgs)									See Site Plan ↑ N ↓			
Date												
Time												
Meas. From												
Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL					SCHMATIC	COMMENTS	
19					Boring terminated at 20 feet bgs.						PVC sump (18'-19') PVC end cap 20'	
20												
					COMMENTS:							
SAMPLING METHOD SS = SPLIT SPOON A = AUGER CUTTINGS C = CORED					See page 1 comments.							

Contractor: SJB					PARSONS DRILLING RECORD					BORING/ WELL NO. MW-119-3	
Driller: Walt Ketter					PROJECT NAME: Seneca Army Depot-SEAD 119					Location Description:	
Inspector: Ed Ashton					PROJECT NUMBER: 739855.01002					Former Small Arms Range	
Rig Type: ATV-CME-850										Near Lake Shore Housing	
GROUNDWATER OBSERVATIONS					Weather: Cloudy - 80°F					Location Plan	
Water Level (bgs)	8.62'									See Site Plan	
Date	8/8/02									↑ N	
Time	0844										
Meas. From	TOC										
Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL					SCHMATIC	COMMENTS
+3											
+2											
+1											
0											
1		3	50	NA	(0'-2'): Brown, silt with fine sand, roots, trace fine gravel, dry. (SM)						
2		8									
3		10	50	NA	(2'-4'): Brown, silt with trace-fine sand, fragments of black shale, dry. (ML/SM)-Till						
4		18									
5		25									
6		25									
7		37									
8		13	80	NA	(4'-6'): Brown, silt with fine sand, trace-fine gravel, trace clay, d (ML/SM)-Till						
9		16									
10		16									
11		19									
12		13	40	NA	(6'-7.5'): Same As Above With the Exception of Fragments of Black Shale Present. (ML/SM)-Til						
13		21									
14		32			Refusal at 7.5 feet. Drilled to 8 feet with HSA:						
15		50/0									
16		14	20	NA	(8'-8.8'): Same As Above. (ML/SM)-Til						
17		50/3									
18											
19											
20		32	10	NA	(10'-10.9'): Brown, silt with black shale, trace fine sand, dry. (ML/SM)-T						
21		50/4									
22											
23											
24		34	10	NA	(12'-12.6'): Grey, silt with clay, black shale, moist to wet at 12.6 fe (ML/SM)-Till.						
25		50/1									
26											
27											
28											
29		50/0	0	NA	Refusal at 14.0 feet; Tip of spoon wet						
30					Drilled to 16 feet with HSAs.						
31											
32					Boring terminated at 16 feet bgs.						
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											
61											
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											
81											
82											
83											
84											
85											
86											
87											
88											
89											
90											
91											
92											
93											
94											
95											
96											
97											
98											
99											
100											



SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
No environmental samples collected.

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

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

Well ID	Well Type	Point of Well Relative to Ground Surface (ft)	Point of Well Relative to Top of PVC (ft)	Diameter of Boring (in)	Diameter of Well (in)	Well Screen Length (ft)	Screened Interval Relative to TOC (ft)			Well Screen Slot Size (in)	Ground Surface Elevation	Elevation of Top of PVC Well (MSL)	Elevation of Top of Casing	Height of PVC Well Stickup (ft)	Well Casing Material	Well Screen Material
							from	to	at							
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 Aquifer

OVERBURDEN BORING REPORT

PARSONS

CLIENT: UDA COE

BORING NO.: SB Demo-24

COMMENTS:

DRILLER: Harry Lyon

INSPECTOR: Rossmann / McAllister

DATE: 10/25/12

DEPTH T H (FT)	SAMPLING			SAMPLE			SAMPLE DESCRIPTION (As per Burmeister: color, grain size, MAJOR COMPONENT, Minor Components with amount modifiers and grain-size, density, stratification, wetness, etc.)	USCS CLASS	STRATUM CLASS
	BLOWS PER 6 INCHES	PENE- TRATION RANGE (FEET)	RECOV- ERY RANGE (FEET)	DEPTH INT (FEET)	NO.	VOC			
7							Moist Fill material - Rocky (Angular/subangular)		
12									
20		2'	2'				Packed to 16"		
15									
4							wet Grey clay w/silt Angular rock frag throughout.		
8									
12		2'	1'				Moist Grey clay. Bricks @ 5ft		
14									
4							5" weathered bedrock		
5		1.9'	1'						
15							weathered shale - dry		
6		4"	3"						
8							NO recovery. Spoon Retrieval		
10		1"	-						
15									
20									

OVERBURDEN BORING REPORT

PARSONS	CLIENT: <u>WACO</u>	BORING NO.: <u>MW Demo-3</u>
----------------	---------------------	------------------------------

PROJECT: <u>PED</u>	START DATE: <u>10/29/02</u>
SWMU # (AREA): <u>DEMO</u>	FINISH DATE: <u>+</u>
SOP NO.: <u>741175</u>	CONTRACTOR: <u>Lyon Drilling</u>

DRILLING SUMMARY						
DRILLING METHOD	HOLE DIA. (ft)	DEPTH INTERVAL (ft)	SAMPLER		HAMMER	
			SIZE	TYPE	TYPE	WT/FALL
<u>HSA</u>		<u>0-8</u>	<u>2"</u>	<u>SS</u>		

DRILLER: <u>Harry / Rick</u>
INSPECTOR: <u>Jenn / Ben</u>
CHECKED BY: _____
CHECK DATE: _____
BORING CONVERTED TO MW? Y N

DRILLING ACRONYMS

HSA HOLLOW-STEM AUGERS	HMR HAMMER	SS SPLIT SPOON
DW DRIVE-AND-WASH	SHR SAFETY HAMMER	CS CONTINUOUS SAMPLING
MRLSC MUD-ROTARY SOIL-CORING	HHR HYDRAULIC HAMMER	SI 5 FT INTERVAL SAMPLING
CA CASING ADVANCER	DHR DOWN-HOLE HAMMER	NS NO SAMPLING
SPC SPIN CASING	WL WIRE-LINE	ST SHELBY TUBE
		3S 3 INCH SPLIT SPOON

MONITORING EQUIPMENT SUMMARY

INSTRUMENT TYPE	DETECTOR TYPE/ENERGY	RANGE	BACKGROUND			CALIBRATION		WEATHER (TEMP., WIND, ETC.)
			READING	TIME	DATE	TIME	DATE	

MONITORING ACRONYMS

PID PHOTO - IONIZATION DETECTOR	BGD BACKGROUND	DGRT DRAEGER TUBES
FID FLAME - IONIZATION DETECTOR	CPM COUNTS PER MINUTE	PPB PARTS PER BILLION
GMD GEIGER MUELLER DETECTOR	PPM PARTS PER MILLION	MDL METHOD DETECTION LIMIT
SCT SCINTILLATION DETECTOR	RAD RADIATION METER	

INVESTIGATION DERIVED WASTE

DATE	<u>10/29/02</u>		
SOIL AMOUNT : (fraction of drum)	<u>1/2 drum</u>		
DRUM #, LOCATION:			

COMMENTS:	SAMPLES TAKEN: <u>None</u> SAMPLES _____ DUPLICATES _____ MS/MSD _____ MRD _____
-----------	--

OVERBURDEN BORING REPORT

PARSONS

CLIENT: WA-COE

BORING NO.: MWDKmo-3

COMMENTS:

No soil samples collected

DRILLER: Henry Lyon

INSPECTOR: Rossmann/McMistr

DATE: 10/9/02

DEPTH (FT)	SAMPLING			SAMPLE				SAMPLE DESCRIPTION <small>(As per Burmeister: color, grain size, MAJOR COMPONENT, Minor Components with amount modifiers and grain-size, density, stratification, wetness, etc.)</small>	USCS CLASS	STRATUM CLASS
	BLOWS PER 6 INCHES	PENETRATION RANGE (FEET)	RECOVERY RANGE (FEET)	DEPTH INT (FEET)	NO.	VOC	RAD SCRIN			
5	8							Dry Rock Gray	7	
14										
17		2'	1'					Slightly moist Brown silt	m2	
13										
27								moist Brown silt w/ weathered shale at bottom (dry)	m2	
7		2'	1'							
9								weathered shale - dry.	-	
14										
4										
5		2'	1'							
6										
		8"	10"							
8										
10										
15										
20										

OVERBURDEN BORING REPORT

PARSONS	CLIENT: <u>WACO</u>	BORING NO.: <u>MW DRMO-4</u>
----------------	---------------------	------------------------------

PROJECT: <u>P20</u>	START DATE: <u>10/29/02</u>
SWMU # (AREA): <u>DRMO</u>	FINISH DATE: <u>↓</u>
SOP NO.: <u>741175</u>	CONTRACTOR: <u>Harry Lynn Drilly</u>

DRILLING SUMMARY						
DRILLING METHOD	HOLE DIA. (R)	DEPTH INTERVAL (R)	SAMPLER		HAMMER	
			SIZE	TYPE	TYPE	WT/FALL
<u>HSA</u>	<u>1/4</u>	<u>0-8</u>	<u>2"</u>	<u>SS</u>		

DRILLER: <u>Harry / Rick</u>
INSPECTOR: <u>Tom / Ben</u>
CHECKED BY: _____
CHECK DATE: _____
BORING CONVERTED TO MW? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

DRILLING ACRONYMS

HSA	HOLLOW-STEM AUGERS	HMR	HAMMER	SS	SPLIT SPOON
DW	DRIVE-AND-WASH	SHR	SAFETY HAMMER	CS	CONTINUOUS SAMPLING
MRLSC	MUD-ROTARY SOIL-CORING	HHR	HYDRAULIC HAMMER	5I	5 FT INTERVAL SAMPLING
CA	CASING ADVANCER	DHR	DOWN-HOLE HAMMER	NS	NO SAMPLING
SPC	SPIN CASING	WL	WIRE-LINE	ST	SHELBY TUBE
				3S	3 INCH SPLIT SPOON

MONITORING EQUIPMENT SUMMARY

INSTRUMENT TYPE	DETECTOR TYPE/ENERGY	RANGE	BACKGROUND			CALIBRATION		WEATHER (TEMP., WIND, ETC.)
			READING	TIME	DATE	TIME	DATE	

MONITORING ACRONYMS

PID	PHOTO - IONIZATION DETECTOR	BGD	BACKGROUND	DGRT	DRAEGER TUBES
FID	FLAME - IONIZATION DETECTOR	CPM	COUNTS PER MINUTE	PPB	PARTS PER BILLION
GMD	GEIGER MUELLER DETECTOR	PPM	PARTS PER MILLION	MDL	METHOD DETECTION LIMIT
SCT	SCINTILLATION DETECTOR	RAD	RADIATION METER		

INVESTIGATION DERIVED WASTE

DATE	<u>10/29/02</u>		
SOIL AMOUNT: (fraction of drum)	<u>1/2 drum</u>		
DRUM #, LOCATION:			

COMMENTS: 	SAMPLES TAKEN: <u>NONE</u> SAMPLES _____ DUPLICATES _____ MS/MSD _____ MRD _____
--------------------------	---

OVERBURDEN BORING REPORT

PARSONS

CLIENT: UDA CoE

BORING NO.: MW DEMO-4

COMMENTS:

DRILLER: Harry Lynn / Rick

INSPECTOR: Rossmann / McAllister

DATE: 10/24/02

DEPTH T H (FT)	SAMPLING			SAMPLE				SAMPLE DESCRIPTION <small>(As per Burmeister: color, grain size, MAJOR COMPONENT, Minor Components with amount modifiers and grain-size, density, stratification, wetness, etc.)</small>	USCS CLASS	STRATUM CLASS
	BLOWS PER 6 INCHES	PENE- TRATION RANGE (FEET)	RECOV- ERY RANGE (FEET)	DEPTH INT (FEET)	NO.	VOC	RAD SCRN			
6	8							moist Brown (dk) SILT last 3" 9" of rock (dry)	ML	
2	5	2'	1'							
7	5							moist Grey SILT w/ some dry weathered shale last 2" trace of clay.	ML	
4	7	2'	1'							
5	10							dry weathered shale	-	
5	32	2'	1'							
6	24							no recovery Refusal Split spoon	-	
6	5 1/2"	8"	6"							
8		1"	-							
10										
15										
20										

OVERBURDEN BORING REPORT

PARSONS	CLIENT: <u>WDACOE</u>	BORING NO.: <u>MWDKMO-6</u>
----------------	-----------------------	-----------------------------

PROJECT: <u>PID</u>	START DATE: <u>10/29/02</u>
SWMU # (AREA): <u>DKMO</u>	FINISH DATE: <u>↓</u>
SOP NO.: <u>741175</u>	CONTRACTOR: <u>Zyon Drilly</u>

DRILLING SUMMARY						
DRILLING METHOD	HOLE DIA. (ft)	DEPTH INTERVAL (ft)	SAMPLER		HAMMER	
			SIZE	TYPE	TYPE	WT/FALL
<u>HSA</u>	<u>6"</u>	<u>0-8</u>	<u>2"</u>	<u>SS</u>		

DRILLER: <u>Henry / Rick</u>
INSPECTOR: <u>Ben / Jim</u>
CHECKED BY: _____
CHECK DATE: _____
BORING CONVERTED TO MW? Y N

DRILLING ACRONYMS					
HSA	HOLLOW-STEM AUGERS	HMR	HAMMER	SS	SPLIT-SPOON
DW	DRIVE-AND-WASH	SHR	SAFETY HAMMER	CS	CONTINUOUS SAMPLING
MRS LC	MUD-ROTARY SOIL-CORING	HHR	HYDRAULIC HAMMER	SI	5 FT INTERVAL SAMPLING
CA	CASING ADVANCER	DHR	DOWN-HOLE HAMMER	NS	NO SAMPLING
SPC	SPIN CASING	WL	WIRE-LINE	ST	SHELBY TUBE
				3S	3 INCH SPLIT SPOON

MONITORING EQUIPMENT SUMMARY								
INSTRUMENT TYPE	DETECTOR TYPE/ENERGY	RANGE	BACKGROUND			CALIBRATION		WEATHER (TEMP., WIND, ETC.)
			READING	TIME	DATE	TIME	DATE	

MONITORING ACRONYMS					
PID	PHOTO-IONIZATION DETECTOR	BGD	BACKGROUND	DGRT	DRAEGER TUBES
FID	FLAME-IONIZATION DETECTOR	CPM	COUNTS PER MINUTE	PPB	PARTS PER BILLION
GMD	GEIGER MUELLER DETECTOR	PPM	PARTS PER MILLION	MDL	METHOD DETECTION LIMIT
SCT	SCINTILLATION DETECTOR	RAD	RADIATION METER		

INVESTIGATION DERIVED WASTE			
DATE	<u>10/29/02</u>		
SOIL AMOUNT : (fraction of drum)	<u>1/2 drum</u>		
DRUM #, LOCATION:			

COMMENTS: 	SAMPLES TAKEN: <u>None</u> SAMPLES _____ DUPLICATES _____ MS/MSD _____ MRD _____
--------------------------	---

OVERBURDEN BORING REPORT

PARSONS

CLIENT: USA COE

BORING NO.: MWDemo -6

COMMENTS:

DRILLER: Harry Lyon
 INSPECTOR: Rossmann / McAllister
 DATE: 10/29/02

DEPTH (FT)	SAMPLING			SAMPLE			SAMPLE DESCRIPTION <small>(As per Burmeister: color, grain size, MAJOR COMPONENT, Minor Components with amount modifiers and grain-size, density, stratification, wetness, etc.)</small>	USCS CLASS	STRATUM CLASS
	BLOWS PER 6 INCHES	PENE-TRATION RANGE (FEET)	RECOV-ERY RANGE (FEET)	DEPTH INT (FEET)	NO.	VOC			
2	4 10 11 8 4	2'	3/4'				Rocky Fill	-	
4	6 9 14	2'	1'				most rocky Brown silt, stiff	ML	
5	8 20/2"	8"	8"				Dry weathered shale	-	
6	9/1"	1"	4"				Dry weathered shale	-	
8									
10									
15									
20									

OVERBURDEN BORING REPORT

PARSONS CLIENT: WACO BORING NO.: MWDemo-5

PROJECT: PED START DATE: 10/29/02
 SWMU # (AREA): Demo FINISH DATE: 10/29/02
 SOP NO.: 741175 CONTRACTOR: Lyon Drilling

DRILLING SUMMARY						
DRILLING METHOD	HOLE DIA. (R)	DEPTH INTERVAL (R)	SAMPLER		HAMMER	
			SIZE	TYPE	TYPE	WT/FALL
<u>HSA</u>	<u>6"</u>	<u>0-8</u>	<u>2"</u>	<u>SS</u>		

DRILLER: Harry Reid
 INSPECTOR: Ben Jenn
 CHECKED BY: _____
 CHECK DATE: _____
 BORING CONVERTED TO MW? Y N

DRILLING ACRONYMS

HSA	HOLLOW-STEM AUGERS	HMR	HAMMER	SS	SPLIT SPOON
DW	DRIVE-AND-WASH	SHR	SAFETY HAMMER	CS	CONTINUOUS SAMPLING
MRLC	MUD-ROTARY SOIL-CORING	HHR	HYDRAULIC HAMMER	SI	5 FT INTERVAL SAMPLING
CA	CASING ADVANCER	DHR	DOWN-HOLE HAMMER	NS	NO SAMPLING
SPC	SPIN CASING	WL	WIRE-LINE	ST	SHELBY TUBE
				3S	3 INCH SPLIT SPOON

MONITORING EQUIPMENT SUMMARY

INSTRUMENT TYPE	DETECTOR TYPE/ENERGY	RANGE	BACKGROUND			CALIBRATION		WEATHER (TEMP., WIND, ETC.)
			READING	TIME	DATE	TIME	DATE	

MONITORING ACRONYMS

PID	PHOTO - IONIZATION DETECTOR	BGD	BACKGROUND	DGRT	DRAEGER TUBES
FID	FLAME - IONIZATION DETECTOR	CPM	COUNTS PER MINUTE	PPB	PARTS PER BILLION
GMD	GEIGER MUELLER DETECTOR	PPM	PARTS PER MILLION	MDL	METHOD DETECTION LIMIT
SCT	SCINTILLATION DETECTOR	RAD	RADIATION METER		

INVESTIGATION DERIVED WASTE

DATE	<u>10/29/02</u>		
SOIL AMOUNT : (fraction of drum)	<u>1/2 drum</u>		
DRUM #, LOCATION:			

COMMENTS: _____ _____ _____	SAMPLES TAKEN: <u>none</u> SAMPLES _____ DUPLICATES _____ MS/MSD _____ MRD _____
---	---

OVERBURDEN BORING REPORT

PARSONS

CLIENT: USACE

BORING NO.: MW Dermo - 5

COMMENTS:

DRILLER: Harry Lyon

INSPECTOR: Rossmann / McAllister

DATE: 10/29/02

DEPTH (FT)	SAMPLING			SAMPLE			SAMPLE DESCRIPTION <small>(As per Burmeister: color, grain size, MAJOR COMPONENT, Minor Components with amount modifiers and grain-size, density, stratification, wetness, etc.)</small>	USCS CLASS	STRATUM CLASS
	BLOWS PER 6 INCHES	PENE- TRATION RANGE (FEET)	RECOV- ERY RANGE (FEET)	DEPTH INT (FEET)	NO.	VOC			
7	12						moist Brown SILT w/ rock fragments	MZ	
2	10	2'	1'				moist Brown SILT w/ rock fragments (4")	MZ	
5	12						Dry weathered shale		
	25	2'	1'						
	28								
4	40								
	35								
5	50/2	8"	8"				Dry weathered shale	-	
6	50/4"								
		4"	8"				Dry weathered shale	-	
8									
10									
15									
20									

Contractor: NorthStar Drilling Driller: S. Breeds Inspector: E. Ashton Rig Type: CME-45					PARSONS DRILLING RECORD		BORING/ WELL NO. MW-1		Sheet # 1 of 1 #																						
					PROJECT NAME: Seneca Army Depot - SEAD 122B PROJECT NUMBER: 741401.031		Location Description: SEE SITE PLAN																								
GROUNDWATER OBSERVATIONS					Weather: Sunny - 75' F		Location Plan																								
<table border="1"> <tr><td>Water Level</td><td>6.00</td><td>7.02</td><td>7.48</td><td></td></tr> <tr><td>Date</td><td>7/11/02</td><td>7/22/02</td><td>7/24/02</td><td></td></tr> <tr><td>Time</td><td>0830</td><td>0830</td><td>1035</td><td></td></tr> <tr><td>Meas. From</td><td>TOC</td><td>TOC</td><td>TOC</td><td></td></tr> </table>					Water Level	6.00	7.02	7.48		Date	7/11/02	7/22/02	7/24/02		Time	0830	0830	1035		Meas. From	TOC	TOC	TOC		Date/Time Start: 7/08/02-1020		SEE SITE PLAN				
Water Level	6.00	7.02	7.48																												
Date	7/11/02	7/22/02	7/24/02																												
Time	0830	0830	1035																												
Meas. From	TOC	TOC	TOC																												
					Date/Time Finish: 7/08/02-1530																										
Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL		SCHEMATIC		COMMENTS stickup casing																						
0-2		1/3 5/8	50	NA	(0'-2') Brown to Grey, roots, silt with clay, trace of fine sand and fine gravel, dry. (SM/SC)				← Grout 0-1.5'																						
2-4		17/22 21/20	NR	NA	(2'-4') No recovery in split-spoon.				← Bentonite Pellets 1.5'-3.5' 2" PVC Riser																						
4-6		15/17 23/30	50	NA	(4'-6') Brown, silt with trace of clay, trace of fine sand, fine to medium gravel, black shale interbedded, dry. (SM (Till))				← Filtered sand (#00N) pack - 3.5'-4' ← Filtered sand (#0) pack - 4'-17.5'																						
6-8		50/ 50/3	20	NA	(6'-6.8') Same as above. (SM (Till)). Note: Refusal encountered at 6.8' bgs. Course gravel of black shale in tip of spoon. Drilled to 8' bgs with HSAs.				← 0.010 Slot PVC Screen 6'-16'																						
8-10		50/3	2	NA	(8'-8.3') Same as above. (SM (Till)) Note: Refusal encountered at 8.3' bgs. Black shale predominant in spoon. Drilled to 10' bgs with HSAs.																										
10-12		25/31 50/ 50/3	80	NA	(10-11.8') Brown, silt with trace clay and interbedded shale, dry. (SM (Till)) Note: Refusal encountered at 11.8' bgs. Drilled to 12' bgs with HSAs.																										
12-14	122B-1040	17/25 40/40	100	NA	(12-14') Same as above. (SM (Till))																										
14-16		65/ 50/2	10	NA	(14'-14.7') Brown to Grey, silt with clay and interbedded shale, wet. (SM (Till)) Note: Refusal encountered at 14.7' bgs. Attempted to drill to 20' bgs, but encountered auger refusal at 17.5' bgs.				← 16' ← Sch. 40 PVC Sump 16'-16.5'																						
16-18		NA	NA	NA	Terminated soil boring at 17.5' bgs.				17.5'																						

SAMPLING METHOD

SS - SPLIT SPOON
A - AUGER CUTTINGS
C - CORED

COMMENTS:

Collected soil sample 122B-1040 for total lead analysis.
6-inch PVC sump installed at bottom of well screen.
2-inch well installed.

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

PROTECTIVE RISER COMPLETION

PARSONS:	CLIENT: <u>ACCE</u>	WELL #: <u>1</u>
PROJECT: <u>Seneca Army Depot</u>	PROJECT NO: <u>7414d. 0310</u>	INSPECTOR: <u>EJH/LTA</u>
LOCATION: <u>Romulus, NY</u>	CHECKED BY: <u>EJH/LTA</u>	

DRILLING CONTRACTOR: <u>North Star Drilling, Inc.</u>	POW DEPTH: <u>16.5'</u>
DRILLER: <u>Scott Breads</u>	INSTALLATION STARTED: <u>7/08/02</u>
DRILLING COMPLETED: <u>7/08/02</u>	INSTALLATION COMPLETED: <u>7/08/02</u>
BORING DEPTH: <u>17.5'</u>	SURFACE COMPLETION DATE: <u>7/12/02</u>
DRILLING METHOD(S): <u>Hollow Stem augers.</u>	COMPLETION CONTRACTOR/CREW: <u>North Star Drilling</u>
BORING DIAMETER(S): <u>8.25</u>	BEDROCK CONFIRMED (Y/N?): <u>Y</u>
ASSOCIATED SWMU/AOC: <u>SEAD-122B</u>	ESTIMATED GROUND ELEVATION: <u>635.14'</u>

PROTECTIVE SURFACE CASING:

DIAMETER: 4" LENGTH: 3.5' TOR: Steel

RISER:

TOC: 637.16' TYPE: Sch 40, PVC DIAMETER: 2" LENGTH: 8.02'

SCREEN:

TSC: 629.14' TYPE: Sch 40, PVC DIAMETER: 2" LENGTH: 10' SLOT SIZE: 10-slot

POINT OF WELL: (SILT SUMP)

YPE: - BSC: 619.14' POW: 618.64'

GROUT:

TG: 635.14' TYPE: Cement/Bent. LENGTH: 1.5'

SEAL:

TBS: 633.64 TYPE: Pellets LENGTH: 2'

SAND PACK:

TSP: 631.64 TYPE: Mix # 00N (3.5-4') # 06447.51 LENGTH: 14'

SURFACE COLLAR:

TYPE: concrete RADIUS: 2' x 2' THICKNESS CENTER: 6" THICKNESS EDGE: 6"

CENTRALIZER DEPTHS

DEPTH 1: NA DEPTH 2: NA DEPTH 3: NA DEPTH 4: NA

COMMENTS:

See Boring Log for in depth details

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

Contractor: NorthStar Drilling					PARSONS DRILLING RECORD					BORING/ WELL NO. MW-2		Sheet # 1 of 1 #	
Driller: S. Breeds					PROJECT NAME: Seneca Army Depot - SEAD 122B					Location Description: SEE SITE PLAN			
Inspector: E. Ashton					PROJECT NUMBER: 741401.031								
Rig Type: CME-45													
GROUNDWATER OBSERVATIONS					Weather: Cloudy - 65°F					Location Plan			
Water Level	6.5	7.38	7.54						SEE SITE PLAN				
Date	7/12/02	7/22/02	7/24/02	Date/Time Start: 7/09/02-0920									
Time	0835	0835	1040	Date/Time Finish: 7/09/02-1302									
Meas. From	TOC	TOC	TOC										
Sample Depth	Sample ID.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL					SCHEMATIC		COMMENTS stickup casing	
0-2		2/3 3/4	50	NA	(0'-2') Brown, silt with clay, trace of fine sand and fine gravel, roots, dry. (SM/SC)					← Grout 0'-1.5'			
2-4		5/8 10/14	40	NA	(2'-4') Same as above, except no roots and color of soil brown to grey. (SM/SC)					← Bentonite Pellets 1.5'-3.5' 2" PVC Riser			
4-6		13/23 35/40	100	NA	(4'-6') Brown, silt with clay and interbedded shale, dry. (SM/SC (Till))					← Filtered sand (#00N) pack - 3.5'-4'			
6-8		50/ 50/3	NA	NA	(6'-8') No recovery. Note: Refusal encountered at 6.8' bgs. Drilled to 8' bgs with HSAs.					← 0.010 Slot PVC Screen 6'-15.7'			
8-10		50/3	NA	NA	(8'-10') No recovery. Note: Refusal encountered at 8.3' bgs. Drilled to 10' bgs with HSAs. Course gravel of black shale present in tip of spoon.					← Filtered sand (#0) pack - 4'-16.5'			
10-12		37/40 50/2	50	NA	(10'-11.2') Brown to Grey, silt with clay and interbedded shale, dry. (SM/SC (Till))								
12-14		34/25 23/24	100	NA	(12'-14') Grey, silt with clay and interbedded shale, moist. (SM/SC (Till))								
14-16	122B-1041	22/24 33/50/ .4	80	NA	(14'-16') Same as above. (SM/SC (Till))								
16-18		50/3	2	NA	(16'-16.3') Weathered black shale, wet. (Shale) Note: Refusal encountered at 16.3' bgs. Attempted to drill to 20' bgs, but encountered auger refusal at 16.5' bgs. Boring Terminated at 16.5' bgs.					← Sch. 40 PVC Sump 16' 15.7'-16' 16.5'			
SAMPLING METHOD					COMMENTS:								
SS - SPLIT SPOON					Collected soil sample 122B-1041 for total lead analysis.								
A - AUGER CUTTINGS					3-inch PVC sump installed at bottom of well screen.								
C - CORED					2-inch well installed.								

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL

PROTECTIVE RISER COMPLETION

PARSONS ..		CLIENT: <u>ACUE</u>	WELL #: <u>2</u>
PROJECT: <u>Seneca Army Depot</u>		PROJECT NO: <u>74/401.03100</u>	INSPECTOR: <u>EJH/SLT</u>
LOCATION: <u>Romulus, NY</u>		CHECKED BY: <u>EJH/SLT</u>	
DRILLING CONTRACTOR: <u>North Star Drilling, Inc.</u>	POW DEPTH: <u>16.0'</u>		
DRILLER: <u>Scott Breads</u>	INSTALLATION STARTED: <u>7/09/02</u>		
DRILLING COMPLETED: <u>7/09/02</u>	INSTALLATION COMPLETED: <u>7/09/02</u>		
BORING DEPTH: <u>16.5'</u>	SURFACE COMPLETION DATE: <u>7/12/02</u>		
DRILLING METHOD(S): <u>Hollow Stem auger</u>	COMPLETION CONTRACTOR/CREW: <u>North Star Drilling</u>		
BORING DIAMETER(S): <u>F. 25</u>	BEDROCK CONFIRMED (Y/N?): <u>Y</u>		
ASSOCIATED SWMU/AOC: <u>SFAD-122B</u>	ESTIMATED GROUND ELEVATION: <u>624.83'</u>		
PROTECTIVE SURFACE CASING:			
DIAMETER: <u>4"</u>		LENGTH: <u>3.5'</u>	TOR: <u>steel</u>
RISER:			
TOC: <u>626.82'</u>	TYPE: <u>Sch 40 PVC</u>	DIAMETER: <u>2"</u>	LENGTH: <u>7.99'</u>
SCREEN:			
TSC: <u>618.83'</u>	TYPE: <u>Sch 40 PVC</u>	DIAMETER: <u>2"</u>	LENGTH: <u>9.7'</u>
			SLOT SIZE: <u>10-slot</u>
POINT OF WELL: (SILT SUMP)			
YPE: <u>-</u>	BSC: <u>609.13'</u>	POW: <u>608.83'</u>	
GROUT:			
TG: <u>624.83'</u>	TYPE: <u>Grout/Bed.</u>	LENGTH: <u>1.5'</u>	
SEAL: TBS: <u>623.33'</u>	TYPE: <u>Pellets</u>	LENGTH: <u>2'</u>	
SAND PACK: TSP: <u>621.33'</u>	TYPE: <u>man # 40 (C 3.5-4) 40 (C 6-16.5)</u>	LENGTH: <u>13'</u>	
SURFACE COLLAR:			
TYPE: <u>concrete</u>	RADIUS: <u>2' x 2'</u>	THICKNESS CENTER: <u>6"</u>	THICKNESS EDGE: <u>6"</u>
CENTRALIZER DEPTHS			
DEPTH 1: <u>NA</u>	DEPTH 2: <u>NA</u>	DEPTH 3: <u>NA</u>	DEPTH 4: <u>NA</u>
COMMENTS:			
<u>See Boring Log for in-depth details</u>			

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

Contractor: <u>NorthStar Drilling</u> Driller: <u>S. Breeds</u> Inspector: <u>E. Ashton</u> Rig Type: <u>CME-45</u>					PARSONS DRILLING RECORD					BORING/ WELL NO. <u>MW-3</u>		Sheet # <u>1</u> of <u>1</u> #																																																																																		
					PROJECT NAME: <u>Seneca Army Depot - SEAD 122B</u> PROJECT NUMBER: <u>741401.031</u>					Location Description: <u>SEE SITE PLAN</u>																																																																																				
GROUNDWATER OBSERVATIONS					Weather: <u>Sunny - 60°F</u>					Location Plan																																																																																				
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Water Level</td> <td>5.6</td> <td>6.44</td> <td>6.68</td> <td></td> </tr> <tr> <td>Date</td> <td>7/12/02</td> <td>7/22/02</td> <td>7/24/02</td> <td></td> </tr> <tr> <td>Time</td> <td>0840</td> <td>0840</td> <td>1045</td> <td></td> </tr> <tr> <td>Meas. From</td> <td>TOC</td> <td>TOC</td> <td>TOC</td> <td></td> </tr> </table>					Water Level	5.6	6.44	6.68		Date	7/12/02	7/22/02	7/24/02		Time	0840	0840	1045		Meas. From	TOC	TOC	TOC		Date/Time Start: <u>7/10/02 - 0840</u>					SEE SITE PLAN																																																																
Water Level	5.6	6.44	6.68																																																																																											
Date	7/12/02	7/22/02	7/24/02																																																																																											
Time	0840	0840	1045																																																																																											
Meas. From	TOC	TOC	TOC																																																																																											
					Date/Time Finish: <u>7/10/02 - 0930</u>																																																																																									
					FIELD IDENTIFICATION OF MATERIAL					SCHEMATIC		COMMENTS <i>stickup casing</i>																																																																																		
Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>0-2</td> <td></td> <td>5/6/ 21/22</td> <td>80</td> <td>NA</td> <td>(0'-2') Brown, silt with minor clay, roots, trace of fine sand and fine to medium gravel, dry. (SM)</td> <td rowspan="14" style="text-align: center; vertical-align: middle;"> </td> <td>← Grout (0'-1.5')</td> </tr> <tr> <td>2-4</td> <td></td> <td>22/25 23/28</td> <td>2</td> <td>NA</td> <td>(2'-4') Fine to course gravel. Very little to no recovery in spoon.</td> <td>← 2" PVC Riser</td> </tr> <tr> <td>4-6</td> <td></td> <td>23/21 30/33</td> <td>80</td> <td>NA</td> <td>(4'-6') Grey, silt with trace clay, fine to medium gravel, trace of fine sand, dry. (SM)</td> <td>← Bentonite Pellets (1.5'-3')</td> </tr> <tr> <td>6-8</td> <td></td> <td>50/3</td> <td>NA</td> <td>NA</td> <td>(6'-6.3') No recovery. Note: Refusal encountered at 6.3' bgs. Drilled to 8' bgs. with HSAs. Course gravel of black shale in tip of spoon.</td> <td>← Filtered sand (#00N) pack - 3'-3.5'</td> </tr> <tr> <td>8-10</td> <td></td> <td>30/ 50/3</td> <td>20</td> <td>NA</td> <td>(8'-8.8') Brown to Grey, silt with clay and interbedded shale, dry. (SM/SC (Till)) Note: Refusal encountered at 8.8' bgs. Drilled to 10' bgs. with HSAs.</td> <td>← Filtered sand (#0) pack (3.5'-15')</td> </tr> <tr> <td>10-12</td> <td></td> <td>35/ 50/3</td> <td>40</td> <td>NA</td> <td>(10'-10.8') Same as above. (SM/SC (Till)) Note: Refusal encountered at 10.8' bgs. Drilled to 12' bgs. with HSAs.</td> <td>← 0.010" Slot, Sch 40 PVC Screen (4'-14')</td> </tr> <tr> <td>12-14</td> <td>122B- 1042</td> <td>38/ 50/3</td> <td>50</td> <td>NA</td> <td>(12'-12.8') Brown to Grey, silt with clay and interbedded shale, dry. (SM/SC (Till)) Note: Refusal encountered at 12.8' bgs. Drilled to 14' bgs. with HSAs.</td> <td></td> </tr> <tr> <td>14-16</td> <td></td> <td>50/1</td> <td>50</td> <td>NA</td> <td>(14'-14.1') No recovery. Note: Refusal encountered at 14.1' bgs. Tip of spoon wet. Attempted to drill to 20' bgs., but encountered auger refusal at 15' bgs. Terminated soil boring at 15' bgs.</td> <td>← Sch. 40 PVC Sump</td> </tr> <tr> <td>16-18</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>← 14'</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>← 14.5'</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>← 14'-14.5'</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>← 15'</td> </tr> </table>					0-2		5/6/ 21/22	80	NA	(0'-2') Brown, silt with minor clay, roots, trace of fine sand and fine to medium gravel, dry. (SM)		← Grout (0'-1.5')	2-4		22/25 23/28	2	NA	(2'-4') Fine to course gravel. Very little to no recovery in spoon.	← 2" PVC Riser	4-6		23/21 30/33	80	NA	(4'-6') Grey, silt with trace clay, fine to medium gravel, trace of fine sand, dry. (SM)	← Bentonite Pellets (1.5'-3')	6-8		50/3	NA	NA	(6'-6.3') No recovery. Note: Refusal encountered at 6.3' bgs. Drilled to 8' bgs. with HSAs. Course gravel of black shale in tip of spoon.	← Filtered sand (#00N) pack - 3'-3.5'	8-10		30/ 50/3	20	NA	(8'-8.8') Brown to Grey, silt with clay and interbedded shale, dry. (SM/SC (Till)) Note: Refusal encountered at 8.8' bgs. Drilled to 10' bgs. with HSAs.	← Filtered sand (#0) pack (3.5'-15')	10-12		35/ 50/3	40	NA	(10'-10.8') Same as above. (SM/SC (Till)) Note: Refusal encountered at 10.8' bgs. Drilled to 12' bgs. with HSAs.	← 0.010" Slot, Sch 40 PVC Screen (4'-14')	12-14	122B- 1042	38/ 50/3	50	NA	(12'-12.8') Brown to Grey, silt with clay and interbedded shale, dry. (SM/SC (Till)) Note: Refusal encountered at 12.8' bgs. Drilled to 14' bgs. with HSAs.		14-16		50/1	50	NA	(14'-14.1') No recovery. Note: Refusal encountered at 14.1' bgs. Tip of spoon wet. Attempted to drill to 20' bgs., but encountered auger refusal at 15' bgs. Terminated soil boring at 15' bgs.	← Sch. 40 PVC Sump	16-18						← 14'							← 14.5'							← 14'-14.5'							← 15'
0-2		5/6/ 21/22	80	NA						(0'-2') Brown, silt with minor clay, roots, trace of fine sand and fine to medium gravel, dry. (SM)		← Grout (0'-1.5')																																																																																		
2-4		22/25 23/28	2	NA						(2'-4') Fine to course gravel. Very little to no recovery in spoon.		← 2" PVC Riser																																																																																		
4-6		23/21 30/33	80	NA						(4'-6') Grey, silt with trace clay, fine to medium gravel, trace of fine sand, dry. (SM)		← Bentonite Pellets (1.5'-3')																																																																																		
6-8		50/3	NA	NA						(6'-6.3') No recovery. Note: Refusal encountered at 6.3' bgs. Drilled to 8' bgs. with HSAs. Course gravel of black shale in tip of spoon.		← Filtered sand (#00N) pack - 3'-3.5'																																																																																		
8-10		30/ 50/3	20	NA						(8'-8.8') Brown to Grey, silt with clay and interbedded shale, dry. (SM/SC (Till)) Note: Refusal encountered at 8.8' bgs. Drilled to 10' bgs. with HSAs.		← Filtered sand (#0) pack (3.5'-15')																																																																																		
10-12		35/ 50/3	40	NA						(10'-10.8') Same as above. (SM/SC (Till)) Note: Refusal encountered at 10.8' bgs. Drilled to 12' bgs. with HSAs.		← 0.010" Slot, Sch 40 PVC Screen (4'-14')																																																																																		
12-14	122B- 1042	38/ 50/3	50	NA						(12'-12.8') Brown to Grey, silt with clay and interbedded shale, dry. (SM/SC (Till)) Note: Refusal encountered at 12.8' bgs. Drilled to 14' bgs. with HSAs.																																																																																				
14-16		50/1	50	NA						(14'-14.1') No recovery. Note: Refusal encountered at 14.1' bgs. Tip of spoon wet. Attempted to drill to 20' bgs., but encountered auger refusal at 15' bgs. Terminated soil boring at 15' bgs.		← Sch. 40 PVC Sump																																																																																		
16-18												← 14'																																																																																		
												← 14.5'																																																																																		
												← 14'-14.5'																																																																																		
												← 15'																																																																																		
SAMPLING METHOD SS = SPLIT SPOON A = AUGER CUTTINGS C = CORED										COMMENTS: <u>Collected soil sample 122B-1042 for total lead analysis.</u> <u>6-inch PVC sump installed at bottom of well screen.</u> <u>2-inch well installed.</u>																																																																																				

OVERBURDEN MONITORING WELL COMPLETION REPORT & INSTALLATION DETAIL PROTECTIVE RISER COMPLETION

PARSONS ..		CLIENT: <u>ACOE</u>	WELL #: <u>3</u>
PROJECT: <u>Seneca Army Depot</u>		PROJECT NO: <u>741401.03100</u>	INSPECTOR: <u>E J Ashton</u>
LOCATION: <u>Romulus, NY</u>		CHECKED BY: <u>E J Ashton</u>	
DRILLING CONTRACTOR: <u>Northstar Drilling, Inc</u>	DRILLER: <u>Scott Breeds</u>	POW DEPTH: <u>14.5'</u>	INSTALLATION STARTED: <u>7/10/02</u>
DRILLING COMPLETED: <u>7/10/02</u>	BORING DEPTH: <u>15'</u>	INSTALLATION COMPLETED: <u>7/10/02</u>	SURFACE COMPLETION DATE: <u>7/12/02</u>
DRILLING METHOD(S): <u>Hollow stem Auger</u>	BORING DIAMETER(S): <u>8.25"</u>	COMPLETION CONTRACTOR/CREW: <u>Northstar Drilling</u>	BEDROCK CONFIRMED (Y/N?): <u>Y</u>
ASSOCIATED SWMU/AOC: <u>SEAD-122B</u>	ESTIMATED GROUND ELEVATION: <u>625.82'</u>		
PROTECTIVE SURFACE CASING:			
DIAMETER: <u>4"</u>		LENGTH: <u>3.5'</u>	TOR: <u>Steel</u>
RISER:			
TOC: <u>627.94'</u>		TYPE: <u>Sch 40 PVC</u>	DIAMETER: <u>2"</u> LENGTH: <u>6.12'</u>
SCREEN:			
TSC: <u>621.82'</u>		TYPE: <u>Sch 40 PVC</u>	DIAMETER: <u>2"</u> LENGTH: <u>10'</u> SLOT SIZE: <u>10 slot</u>
POINT OF WELL: (SILT SUMP)			
YPE: <u>-</u>		BSC: <u>611.82'</u>	POW: <u>611.32'</u>
GROUT:			
TG: <u>625.82'</u>		TYPE: <u>Grout/Bent</u>	LENGTH: <u>1.5'</u>
SEAL: TBS: <u>624.32'</u>		TYPE: <u>Pellets</u>	LENGTH: <u>1.5'</u>
SAND PACK: TSP: <u>622.82'</u>		TYPE: <u>mine # 00 (3-3.5") # 00 (4-5")</u>	LENGTH: <u>12'</u>
SURFACE COLLAR:			
TYPE: <u>Concrete</u>		RADIUS: <u>2' x 2'</u>	THICKNESS CENTER: <u>6"</u> THICKNESS EDGE: <u>6"</u>
CENTRALIZER DEPTHS			
DEPTH 1: <u>NA</u>	DEPTH 2: <u>NA</u>	DEPTH 3: <u>NA</u>	DEPTH 4: <u>NA</u>
COMMENTS:			
<u>See Boring Log for in-depth details.</u>			

* ALL DEPTH MEASUREMENTS REFERENCED TO GROUND SURFACE

SEE PAGE 2 FOR SCHEMATIC

APPENDIX B
NOTICE OF INTENT TO PROCEED

PARSONS

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

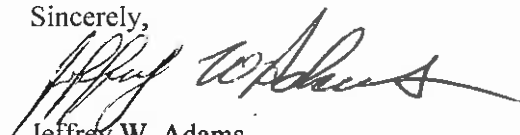
Dear Mr. Vazquez/Mr. Gupta/Mr. Sergott:

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



PARSONS

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

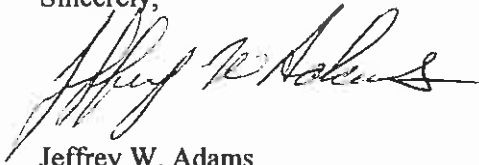
Dear Mr. Nohrstedt:

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 RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW-28</u>																																																
Site Location: <u>SEAD ASH LANDFILL</u>	Driller: <u>David Wort</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/1/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p>CASING PULLING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>10.5 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p>CASE PERFORATING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p>GROUTING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLS)</td><td><u>1-8.3</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td>For each batch record:</td><td></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>8 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>10.5 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLS)	<u>1-8.3</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>8 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: 2.2 ft stick up removed, 10.5 ft TOP TO TD, Soil, Grout, PULLED PVC WELL, Bottom of well, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>10.5 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLS)	<u>1-8.3</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>8 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 6.00 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW-30</u>																																																
Site Location: <u>SEAD ASH LANDFILL</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/20/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>10.5 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-6.6</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>6 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>10.5 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-6.6</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>6 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>10.5 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-6.6</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>6 gal</u>																																																
<p><u>COMMENTS: Depth to water = DRY ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Geologic North Star
 Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW-31</u>																																																
Site Location: <u>SEAD Ash Landfill</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/20/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p>CASING PULLING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>10.4 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p>CASE PERFORATING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p>GROUTING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-10.4 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>10 gal.</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>10.4 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-10.4 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>10 gal.</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: 1 ft stick up Removal, PULLED PVC WELL, 10.4 ft TOP TO TD, Soil, Grout, Bottom of Well, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>10.4 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-10.4 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>10 gal.</u>																																																
<p>COMMENTS: <u>Depth to water = 8.57 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW-33</u>																																																
Site Location: <u>SEAD Ash Landfill</u>	Driller: <u>David Lian</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/20/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>9.8 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-7.2 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>7 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>9.8 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-7.2 ft</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>7 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>2.6 ft stick up removed</p> <p>9.8' TOP TO TD</p> <p>Soil</p> <p>PULLED PVC WELL</p> <p>Grout</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>9.8 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-7.2 ft</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>7 gal</u>																																																
<p>COMMENTS: <u>Depth to water = ft from TOC</u></p> <p><u>Knocked out end cap. Loaded casing with grout.</u></p> <p><u>Pulled casing. Grouted remaining borehole.</u></p> <p><u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW-34</u>																																																
Site Location: <u>SEAD - Ash Landfill</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/1/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>18.1 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLS)</td><td><u>1-16.2 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>17 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>18.1 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLS)	<u>1-16.2 ft</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>17 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Handwritten notes on schematic: 1.9 ft Stick up Removed, 18.1 ft TOP TO TD, Soil, PULLED PVC WELL, Grout, Bottom of well, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>18.1 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLS)	<u>1-16.2 ft</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>17 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.58 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW 35D</u>																																																
Site Location: <u>SEAD - Ash Landfill</u>	Driller: <u>David Lyons</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Hillman</u>																																																
Date: <u>1/26/2011</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>grout in place</u></td></tr> <tr><td>Casing retrieved (feet)</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>0-56.3 ft</u></td></tr> <tr><td># of batches prepared</td><td></td></tr> <tr><td>For each batch record:</td><td></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td></td></tr> </table>	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 employed	<u>grout in place</u>	Casing retrieved (feet)		Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>0-56.3 ft</u>	# of batches prepared		For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet) <u>D</u></p> <p>3" stickup removed</p> <p>soil</p> <p>6" PVC casing stayed in place</p> <p>TOP TO TD 56.6'</p> <p>grout</p> <p>PVC 2" casing in place</p> <p>grout</p> <p>grout</p> <p>56.3'</p>
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 employed	<u>grout in place</u>																																																
Casing retrieved (feet)																																																	
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>0-56.3 ft</u>																																																
# of batches prepared																																																	
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p>COMMENTS: <u>Depth to water = 4.29 ft. failed</u> <u>Knocked out end plug. Loaded casing with</u> <u>grout. Dug around casing, cut off below</u> <u>grade. Topped off grout. Filled hole with</u> <u>soil.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW36</u>																																																
Site Location: <u>SEAD - Ash Landfill</u>	Driller: <u>David Lyons</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Hillman</u>																																																
Date: <u>1/26/2011</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Knock, grout, pull, grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>16.6 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>0-15.8 ft</u></td></tr> <tr><td># of batches prepared</td><td></td></tr> <tr><td>For each batch record:</td><td></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 Bags</u></td></tr> <tr><td>Cement type</td><td><u>Typical Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td></td></tr> </table>	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 employed	<u>Knock, grout, pull, grout</u>	Casing retrieved (feet)	<u>16.6 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>0-15.8 ft</u>	# of batches prepared		For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 Bags</u>	Cement type	<u>Typical Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Knock, grout, pull, grout</u>																																																
Casing retrieved (feet)	<u>16.6 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>0-15.8 ft</u>																																																
# of batches prepared																																																	
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 Bags</u>																																																
Cement type	<u>Typical Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p>COMMENTS: <u>Depth to water = 3.45 ft. from TC</u> <u>Knocked out end plug. Loaded casing with grout. Pulled casing. Topped off grout to near surface.</u></p>																																																	

* Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW-37</u>																																																
Site Location: <u>SEAD ASH LANDFILL</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/21/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>13.75 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLS)</td><td><u>1-13.75</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>13 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>13.75 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLS)	<u>1-13.75</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>13 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>2.75' stick up removed</p> <p>13.75' TOP TO TD</p> <p>Soil</p> <p>PULLED PVC WELL</p> <p>Grout</p> <p>Bottom of Well</p> <p>NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>13.75 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLS)	<u>1-13.75</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>13 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 6.30 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																															
Site Name: <u>Ash Landwell</u>	Well ID: <u>MW-30D</u>																																																														
Site Location: <u>SEADG</u>	Driller:																																																														
Drilling Company: <u>Geologic NS</u>	Inspector:																																																														
Date:																																																															
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Interval Drilled</td><td style="width: 20%; border: 1px solid black; height: 15px;"></td></tr> <tr><td>Drilling Method(s)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Borehole Dia. (in.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Depth temporary casing installed</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Casing type/dia. (in.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Method of installing</td><td style="border: 1px solid black; height: 15px;"></td></tr> </table> <p><u>CASING PULLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Method employed</td><td style="width: 20%; border: 1px solid black; height: 15px;"></td></tr> <tr><td>Casing retrieved (feet)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Casing type/dia. (in.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Equipment used</td><td style="width: 20%; border: 1px solid black; height: 15px;"></td></tr> <tr><td>Number of perforations/foot</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Size of perforations</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Interval perforated</td><td style="border: 1px solid black; height: 15px;"></td></tr> </table> <p><u>GROUTING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Interval grouted (FBSL)</td><td style="width: 20%; border: 1px solid black; text-align: center;">29.7</td></tr> <tr><td># of batches prepared</td><td style="border: 1px solid black; text-align: center;">1</td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td style="border: 1px solid black; text-align: center;">18</td></tr> <tr><td>Quantity of cement used (lbs.)</td><td style="border: 1px solid black; text-align: center;">100 lbs</td></tr> <tr><td>Cement type</td><td style="border: 1px solid black; text-align: center;">Portlan</td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td style="border: 1px solid black; text-align: center;">10 lbs</td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Volume of grout used (gal.)</td><td style="border: 1px solid black; text-align: center;">30 gallons</td></tr> </table>	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 employed		Casing retrieved (feet)		Casing type/dia. (in.)		Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBSL)	29.7	# of batches prepared	1	<u>For each batch record:</u>		Quantity of water used (gal.)	18	Quantity of cement used (lbs.)	100 lbs	Cement type	Portlan	Quantity of bentonite used (lbs.)	10 lbs	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	30 gallons	<p align="center">WELL SCHEMATIC*</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Depth (feet)</td> <td style="width: 15%; border-left: 1px solid black; border-right: 1px solid black; text-align: center;">5</td> <td style="width: 15%; border-left: 1px solid black; border-right: 1px solid black; text-align: center;">10</td> <td style="width: 15%; border-left: 1px solid black; border-right: 1px solid black; text-align: center;">15</td> <td style="width: 15%; border-left: 1px solid black; border-right: 1px solid black; text-align: center;">20</td> <td style="width: 15%; border-left: 1px solid black; border-right: 1px solid black; text-align: center;">25</td> <td style="width: 15%; border-left: 1px solid black; border-right: 1px solid black; text-align: center;">30</td> </tr> <tr> <td></td> <td colspan="6" style="text-align: center;"> </td> </tr> </table>	Depth (feet)	5	10	15	20	25	30							
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 employed																																																															
Casing retrieved (feet)																																																															
Casing type/dia. (in.)																																																															
Equipment used																																																															
Number of perforations/foot																																																															
Size of perforations																																																															
Interval perforated																																																															
Interval grouted (FBSL)	29.7																																																														
# of batches prepared	1																																																														
<u>For each batch record:</u>																																																															
Quantity of water used (gal.)	18																																																														
Quantity of cement used (lbs.)	100 lbs																																																														
Cement type	Portlan																																																														
Quantity of bentonite used (lbs.)	10 lbs																																																														
Quantity of calcium chloride used (lbs.)																																																															
Volume of grout prepared (gal.)																																																															
Volume of grout used (gal.)	30 gallons																																																														
Depth (feet)	5	10	15	20	25	30																																																									
<p>COMMENTS:</p> <p><u>Knock out bottom, Grout tremmie, pull top pvc & casing, Remove Risers, report grout</u></p>		<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p> <p align="right">32.4</p>																																																													

Drilling Contractor

Department Representative

3 Aluminum bolters

Grout in place.
I Protective casing.

29.7 TD = 32.4
Grout = 29.7

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW41D</u>																																																
Site Location: <u>SEAD ASH LANDFILL</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/17/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout in place</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>~4.3 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>2-49.7</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>15 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>20 gal.</u></td></tr> </table>	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 employed	<u>Grout in place</u>	Casing retrieved (feet)	<u>~4.3 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>2-49.7</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>15 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>20 gal.</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 10, 20, 30, 40, 50, 60</p> <p>Annotations: - 2.3' stickup removed - casing removed to 2-3 ft - 6" casing set in bedrock - casing filled with grout - soil (top to TD) - Bottom of well (not drilled)</p>
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 employed	<u>Grout in place</u>																																																
Casing retrieved (feet)	<u>~4.3 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>2-49.7</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>15 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>20 gal.</u>																																																
<p><u>COMMENTS: Removed concrete and gravel pipe. Loaded casing with grout. Dug out around well. Cut off casing. Topped off grout. Backfilled hole 0-2 ft with soil.</u></p>																																																	

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW42A</u>																																																
Site Location: <u>Ash Landfill</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/16/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout in place</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>4.2 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>+8 2-45</u></td></tr> <tr><td># of batches prepared</td><td><u>2 bags 1 batch</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>16 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>20 gal</u></td></tr> </table>	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 employed	<u>Grout in place</u>	Casing retrieved (feet)	<u>4.2 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>+8 2-45</u>	# of batches prepared	<u>2 bags 1 batch</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>16 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>20 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 10, 20, 30, 40, 50, 60</p> <p>Annotations: - 2.2' stickup removed (0-2.2 ft) - casing removed (10-20 ft) - casing left in hole (20-47.3 ft) - casing filled with grout (47.3 ft to bottom) - Bottom of well (at 47.3 ft) - Not Drilled (below 60 ft)</p>
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 employed	<u>Grout in place</u>																																																
Casing retrieved (feet)	<u>4.2 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>+8 2-45</u>																																																
# of batches prepared	<u>2 bags 1 batch</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>16 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>20 gal</u>																																																
<p>COMMENTS: <u>Tried to pull guard pipe. Guard pipe broke above pad. Tried to pull PVC well. Would not budge. Stickup broke off. Excavated around well to 2-3 ft. Grouted well in place.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD

Site Name: Seneca Army Depot

Well ID: MW43

Site Location: SEAD ASH LAND FILL

Driller: Scott Breeds

Drilling Company: Geologic North Star

Inspector: Scott Dillman

Date: 9/16/10

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	<u>Grout, Pull, Grout</u>
Casing retrieved (feet)	<u>7.6 ft</u>
Casing type/dia. (in.)	<u>2" PVC</u>

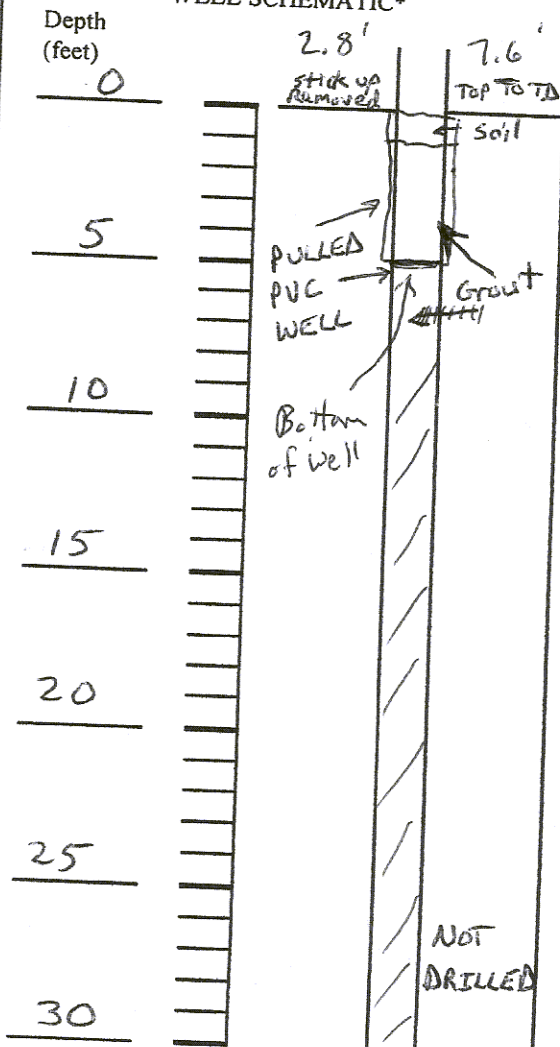
CASE PERFORATING

Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	

GROUTING

Interval grouted (FBLs)	<u>1-4.8 ft</u>
# of batches prepared	<u>1</u>
For each batch record:	
Quantity of water used (gal.)	<u>18</u>
Quantity of cement used (lbs.)	<u>2 bags</u>
Cement type	<u>Type I Portland</u>
Quantity of bentonite used (lbs.)	<u>10 pounds</u>
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	<u>5 gal</u>

WELL SCHEMATIC*



COMMENTS: Depth to water = 5.63 ft from TOC
Knocked out end cap. Loaded casing with grout.
Pulled casing. Grouted remaining borehole.
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

Department Representative

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

MW-45

WELL DECOMMISSIONING RECORD		MW-45																																																													
Site Name: <u>Ash Landfill</u>	Well ID: <u>MW-45</u>																																																														
Site Location: <u>SEAD-6</u>	Driller:																																																														
Drilling Company: <u>Geologic</u>	Inspector: <u>McNisley</u>																																																														
Date:																																																															
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Rig</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>8.4ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>PVC 2"</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>5.4 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18 gallons</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 lbs</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>3 gallons</u></td></tr> </table>	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 employed	<u>Rig</u>	Casing retrieved (feet)	<u>8.4ft</u>	Casing type/dia. (in.)	<u>PVC 2"</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>5.4 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18 gallons</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I portland</u>	Quantity of bentonite used (lbs.)	<u>10 lbs</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>3 gallons</u>	<p align="center">WELL SCHEMATIC*</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">Depth (feet)</th> <th style="width: 10%;"></th> <th style="width: 80%;">WELL SCHEMATIC*</th> </tr> <tr> <td>1</td> <td></td> <td rowspan="5" style="text-align: center; vertical-align: middle;"> </td> </tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> <tr><td>5</td><td></td></tr> </table>	Depth (feet)		WELL SCHEMATIC*	1			2		3		4		5	
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 employed	<u>Rig</u>																																																														
Casing retrieved (feet)	<u>8.4ft</u>																																																														
Casing type/dia. (in.)	<u>PVC 2"</u>																																																														
Equipment used																																																															
Number of perforations/foot																																																															
Size of perforations																																																															
Interval perforated																																																															
Interval grouted (FBLs)	<u>5.4 ft</u>																																																														
# of batches prepared	<u>1</u>																																																														
For each batch record:																																																															
Quantity of water used (gal.)	<u>18 gallons</u>																																																														
Quantity of cement used (lbs.)	<u>2 bags</u>																																																														
Cement type	<u>Type I portland</u>																																																														
Quantity of bentonite used (lbs.)	<u>10 lbs</u>																																																														
Quantity of calcium chloride used (lbs.)																																																															
Volume of grout prepared (gal.)																																																															
Volume of grout used (gal.)	<u>3 gallons</u>																																																														
Depth (feet)		WELL SCHEMATIC*																																																													
1																																																															
2																																																															
3																																																															
4																																																															
5																																																															
<p>COMMENTS:</p> <p><u>Knocked out end cap, then we grout pull protecto casing & pvc backfill hole with remaining grout cover soil</u></p>																																																															

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

Casing pulled

8.4/54

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW 47</u>																																																
Site Location: <u>SEAD - Ash Landfill</u>	Driller: <u>David Lyons</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Hillman</u>																																																
Date: <u>1/26/2011</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Knock, grout, pull, grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>8.5 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>0.6 ft</u></td></tr> <tr><td># of batches prepared</td><td></td></tr> <tr><td>For each batch record:</td><td></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Typical Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td></td></tr> </table>	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 employed	<u>Knock, grout, pull, grout</u>	Casing retrieved (feet)	<u>8.5 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>0.6 ft</u>	# of batches prepared		For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Typical Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Knock, grout, pull, grout</u>																																																
Casing retrieved (feet)	<u>8.5 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>0.6 ft</u>																																																
# of batches prepared																																																	
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Typical Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p>COMMENTS: <u>Depth to water = 3.9 ft. At 4 ft. Knocked out end plug. Loaded casing with grout. Pulled casing. Full recovery. Topped off grout to surface.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

MW-49D

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>Ash Landfill SEAD6</u>	Well ID: <u>MW-49D</u>	
Site Location: <u>SEAD6</u>	Driller:	
Drilling Company: <u>Gedtek NS</u>	Inspector: <u>WCH/PLC</u>	
Date:		
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled <input type="checkbox"/> Drilling Method(s) <input type="checkbox"/> Borehole Dia. (in.) <input type="checkbox"/> Temporary Casing Installed? (y/n) <input type="checkbox"/> Depth temporary casing installed <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/> Method of installing <input type="checkbox"/>		
<u>CASING PULLING</u> Method employed <input type="checkbox"/> Casing retrieved (feet) <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/>		
<u>CASE PERFORATING</u> Equipment used <input type="checkbox"/> Number of perforations/foot <input type="checkbox"/> Size of perforations <input type="checkbox"/> Interval perforated <input type="checkbox"/>		
<u>GROUTING</u> Interval grouted (FBS) <input type="checkbox"/> <u>35'</u> # of batches prepared <input type="checkbox"/> For each batch record: Quantity of water used (gal.) <input type="checkbox"/> <u>18</u> Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u> Cement type <input type="checkbox"/> <u>Type I portland</u> Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 lbs</u> Quantity of calcium chloride used (lbs.) <input type="checkbox"/> Volume of grout prepared (gal.) <input type="checkbox"/> Volume of grout used (gal.) <input type="checkbox"/> <u>8 gallons</u>		
COMMENTS: <u>Knocked out end cap, filled casing with tremie grout, pulled pre River Grout remaining pre in place</u>		
* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.		

Drilling Contractor

Department Representative

Pulled 3 bollards & protected casing
Grout in place 35'

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

WELL DECOMMISSIONING RECORD																																																																	
Site Name: <u>Ash Landfill</u>	Well ID: <u>MW-50D</u>																																																																
Site Location: <u>SEAD6</u>	Driller: <u>Laurie</u>																																																																
Drilling Company: <u>Geologic Northstar</u>	Inspector:																																																																
	Date:																																																																
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*																																																																
<p><u>OVERDRILLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 60%;">Interval Drilled</td><td style="width: 40%;"><input type="text"/></td></tr> <tr><td>Drilling Method(s)</td><td><input type="text"/></td></tr> <tr><td>Borehole Dia. (in.)</td><td><input type="text"/></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td><input type="text"/></td></tr> <tr><td>Depth temporary casing installed</td><td><input type="text"/></td></tr> <tr><td>Casing type/dia. (in.)</td><td><input type="text"/></td></tr> <tr><td>Method of installing</td><td><input type="text"/></td></tr> </table> <p><u>CASING PULLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 60%;">Method employed</td><td style="width: 40%;"><input type="text"/></td></tr> <tr><td>Casing retrieved (feet)</td><td><input type="text"/></td></tr> <tr><td>Casing type/dia. (in.)</td><td><input type="text"/></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 60%;">Equipment used</td><td style="width: 40%;"><input type="text"/></td></tr> <tr><td>Number of perforations/foot</td><td><input type="text"/></td></tr> <tr><td>Size of perforations</td><td><input type="text"/></td></tr> <tr><td>Interval perforated</td><td><input type="text"/></td></tr> </table> <p><u>GROUTING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 60%;">Interval grouted (FBLs)</td><td style="width: 40%;"><u>57.8</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I pack</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 lbs</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td><input type="text"/></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td><input type="text"/></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>20 gallons</u></td></tr> </table>	Interval Drilled	<input type="text"/>	Drilling Method(s)	<input type="text"/>	Borehole Dia. (in.)	<input type="text"/>	Temporary Casing Installed? (y/n)	<input type="text"/>	Depth temporary casing installed	<input type="text"/>	Casing type/dia. (in.)	<input type="text"/>	Method of installing	<input type="text"/>	Method employed	<input type="text"/>	Casing retrieved (feet)	<input type="text"/>	Casing type/dia. (in.)	<input type="text"/>	Equipment used	<input type="text"/>	Number of perforations/foot	<input type="text"/>	Size of perforations	<input type="text"/>	Interval perforated	<input type="text"/>	Interval grouted (FBLs)	<u>57.8</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I pack</u>	Quantity of bentonite used (lbs.)	<u>10 lbs</u>	Quantity of calcium chloride used (lbs.)	<input type="text"/>	Volume of grout prepared (gal.)	<input type="text"/>	Volume of grout used (gal.)	<u>20 gallons</u>	<table style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">Depth (feet)</th> <th style="width: 10%;"></th> <th style="width: 75%;"></th> </tr> <tr> <td style="text-align: center;">10</td> <td style="text-align: center;"> </td> <td rowspan="6" style="text-align: center; vertical-align: middle;"> </td> </tr> <tr><td style="text-align: center;">20</td><td style="text-align: center;"> </td></tr> <tr><td style="text-align: center;">30</td><td style="text-align: center;"> </td></tr> <tr><td style="text-align: center;">40</td><td style="text-align: center;"> </td></tr> <tr><td style="text-align: center;">50</td><td style="text-align: center;"> </td></tr> <tr><td style="text-align: center;">60</td><td style="text-align: center;"> </td></tr> </table>	Depth (feet)			10			20		30		40		50		60	
Interval Drilled	<input type="text"/>																																																																
Drilling Method(s)	<input type="text"/>																																																																
Borehole Dia. (in.)	<input type="text"/>																																																																
Temporary Casing Installed? (y/n)	<input type="text"/>																																																																
Depth temporary casing installed	<input type="text"/>																																																																
Casing type/dia. (in.)	<input type="text"/>																																																																
Method of installing	<input type="text"/>																																																																
Method employed	<input type="text"/>																																																																
Casing retrieved (feet)	<input type="text"/>																																																																
Casing type/dia. (in.)	<input type="text"/>																																																																
Equipment used	<input type="text"/>																																																																
Number of perforations/foot	<input type="text"/>																																																																
Size of perforations	<input type="text"/>																																																																
Interval perforated	<input type="text"/>																																																																
Interval grouted (FBLs)	<u>57.8</u>																																																																
# of batches prepared	<u>1</u>																																																																
For each batch record:																																																																	
Quantity of water used (gal.)	<u>18</u>																																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																																
Cement type	<u>Type I pack</u>																																																																
Quantity of bentonite used (lbs.)	<u>10 lbs</u>																																																																
Quantity of calcium chloride used (lbs.)	<input type="text"/>																																																																
Volume of grout prepared (gal.)	<input type="text"/>																																																																
Volume of grout used (gal.)	<u>20 gallons</u>																																																																
Depth (feet)																																																																	
10																																																																	
20																																																																	
30																																																																	
40																																																																	
50																																																																	
60																																																																	
<p>COMMENTS:</p> <p><u>Pulled riser, 4 bollards, Tremmie grout 20 gallons, pulled top of pic 1 day clean 4ft cut of 2 steel risers</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																																

Drilling Contractor

Department Representative

Pulled 3 bollards & protective casing. Grout in place 57.8

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW51A</u>
Site Location: <u>SEAD - Ash Landfill</u>	Driller: <u>David Lyons</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Hillman</u>
Date: <u>1/25/2011</u> <u>1/26/2011</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="checkbox"/></p> <p>Casing retrieved (feet) <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="checkbox"/></p> <p># of batches prepared <input type="checkbox"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/></p> <p>Cement type <input type="checkbox"/></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/></p>	
<p><u>COMMENTS:</u> <u>Depth to water = NA. St. Francis</u> <u>Knocked out end plug. Loaded casing with</u> <u>grout. Continued to add grout after settling.</u> <u>Casing cut off. Grouted in place. covered</u> <u>hole with soil</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW52D</u>
Site Location: <u>SEAD - Ash Landfill</u>	Driller: <u>David Lyons</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Hillman</u>
Date: <u>1/25/2011</u> <u>1/26/2011</u>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p>CASING PULLING</p> <p>Method employed <input type="checkbox"/> <u>Grout in place</u></p> <p>Casing retrieved (feet) <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u></p> <p>CASE PERFORATING</p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p>GROUTING</p> <p>Interval grouted (FBLs) <input type="checkbox"/> <u>0-58.7 ft</u></p> <p># of batches prepared <input type="checkbox"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/> <u>18</u></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u></p> <p>Cement type <input type="checkbox"/> <u>Typical Portland</u></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>10</p> <p>20</p> <p>30</p> <p>40</p> <p>50</p> <p>60</p> <p>TOP TO TD 58.7</p> <p>Grout</p> <p>58.7</p>
<p>COMMENTS: <u>Depth to water = 4.10 ft. from TC</u> <u>Knocked out end plug. Loaded casing with grout. Continued to add grout after settling.</u> <u>cut off steel casings, covered with soil.</u></p>	

* Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

MW-53

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Ash Landfill</u>	Well ID: <u>MW-53</u>																																																
Site Location: <u>SEAD-6</u>	Driller:																																																
Drilling Company: <u>Geologic</u>	Inspector: <u>McAllister</u>																																																
Date:																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>8-4</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>Rig</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>8-4 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18 gallons</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>Type I port 249 lbs</u></td></tr> <tr><td>Cement type</td><td></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 lbs</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>6 gallons</u></td></tr> </table>	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 employed	<u>8-4</u>	Casing retrieved (feet)	<u>Rig</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>8-4 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18 gallons</u>	Quantity of cement used (lbs.)	<u>Type I port 249 lbs</u>	Cement type		Quantity of bentonite used (lbs.)	<u>10 lbs</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>6 gallons</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>8-4</u>																																																
Casing retrieved (feet)	<u>Rig</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>8-4 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18 gallons</u>																																																
Quantity of cement used (lbs.)	<u>Type I port 249 lbs</u>																																																
Cement type																																																	
Quantity of bentonite used (lbs.)	<u>10 lbs</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>6 gallons</u>																																																
<p>COMMENTS:</p> <p><u>Knocked out end cap. Tremmie grout pull PVC casing & PVC backfill with Grout remaining cover soil.</u></p>		<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																															

Drilling Contractor

Department Representative

Costly pulled

MW-53

TD : 10-4
Grout : 8-0

MW-54D

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

WELL DECOMMISSIONING RECORD		MW. 54D	
Site Name: <u>Ash Landfill</u>		Well ID:	
Site Location: <u>SEAD 6</u>		Driller:	
Drilling Company: <u>Geologic</u>		Inspector:	
		Date:	
DECOMMISSIONING DATA (Fill in all that apply)		WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled _____ Drilling Method(s) _____ Borehole Dia. (in.) _____ Temporary Casing Installed? (y/n) _____ Depth temporary casing installed _____ Casing type/dia. (in.) _____ Method of installing _____ <u>CASING PULLING</u> Method employed _____ Casing retrieved (feet) _____ Casing type/dia. (in.) _____ <u>CASE PERFORATING</u> Equipment used _____ Number of perforations/foot _____ Size of perforations _____ Interval perforated _____ <u>GROUTING</u> Interval grouted (FBS) <u>32.4 ft</u> # of batches prepared <u>1</u> For each batch record: Quantity of water used (gal.) <u>18 gallons</u> Quantity of cement used (lbs.) <u>188 lbs</u> Cement type <u>Portland</u> Quantity of bentonite used (lbs.) <u>10 lbs</u> Quantity of calcium chloride used (lbs.) _____ Volume of grout prepared (gal.) _____ Volume of grout used (gal.) <u>320 gal</u>			
<u>COMMENTS:</u> <u>Keep out bottom of well, remove</u> <u>grout in place remove protective casing</u> <u>backfill hole with remain grout</u>		* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.	

Drilling Contractor
3 bollards

Department Representative

Grout in place
protective casing

MW-54D
TD: 35
Grade 32.4

MW-SSD

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

WELL DECOMMISSIONING RECORD																																																								
Site Name: <i>Ash Landfill</i>	Well ID: <i>MW-SSD</i>																																																							
Site Location: <i>SEAD 6</i>	Driller:																																																							
Drilling Company: <i>Geology</i>	Inspector: <i>McAllister</i>																																																							
Date:																																																								
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 70%;">Interval Drilled</td><td style="width: 30%; border: 1px solid black; height: 15px;"></td></tr> <tr><td>Drilling Method(s)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Borehole Dia. (in.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Depth temporary casing installed</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Casing type/dia. (in.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Method of installing</td><td style="border: 1px solid black; height: 15px;"></td></tr> </table> <p><u>CASING PULLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 70%;">Method employed</td><td style="width: 30%; border: 1px solid black; height: 15px;"></td></tr> <tr><td>Casing retrieved (feet)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Casing type/dia. (in.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 70%;">Equipment used</td><td style="width: 30%; border: 1px solid black; height: 15px;"></td></tr> <tr><td>Number of perforations/foot</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Size of perforations</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Interval perforated</td><td style="border: 1px solid black; height: 15px;"></td></tr> </table> <p><u>GROUTING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 70%;">Interval grouted (FBLs)</td><td style="width: 30%; border: 1px solid black; text-align: center;"><i>SS-8</i></td></tr> <tr><td># of batches prepared</td><td style="border: 1px solid black; text-align: center;"><i>2</i></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td style="border: 1px solid black; text-align: center;"><i>78 gal</i></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td style="border: 1px solid black; text-align: center;"><i>284 lbs</i></td></tr> <tr><td>Cement type</td><td style="border: 1px solid black; text-align: center;"><i>Portland</i></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td style="border: 1px solid black; text-align: center;"><i>20 lbs</i></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Volume of grout used (gal.)</td><td style="border: 1px solid black; text-align: center;"><i>80 gallon</i></td></tr> </table>	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 employed		Casing retrieved (feet)		Casing type/dia. (in.)		Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<i>SS-8</i>	# of batches prepared	<i>2</i>	<u>For each batch record:</u>		Quantity of water used (gal.)	<i>78 gal</i>	Quantity of cement used (lbs.)	<i>284 lbs</i>	Cement type	<i>Portland</i>	Quantity of bentonite used (lbs.)	<i>20 lbs</i>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<i>80 gallon</i>	<p align="center">WELL SCHEMATIC*</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Depth (feet)</td> <td style="width: 10%; border-left: 1px solid black; border-right: 1px solid black; text-align: center;">10</td> <td style="width: 10%; border-left: 1px solid black; border-right: 1px solid black; text-align: center;">20</td> <td style="width: 10%; border-left: 1px solid black; border-right: 1px solid black; text-align: center;">30</td> <td style="width: 10%; border-left: 1px solid black; border-right: 1px solid black; text-align: center;">40</td> <td style="width: 10%; border-left: 1px solid black; border-right: 1px solid black; text-align: center;">50</td> <td style="width: 45%; border-left: 1px solid black; border-right: 1px solid black;"> </td> </tr> </table>	Depth (feet)	10	20	30	40	50	
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 employed																																																								
Casing retrieved (feet)																																																								
Casing type/dia. (in.)																																																								
Equipment used																																																								
Number of perforations/foot																																																								
Size of perforations																																																								
Interval perforated																																																								
Interval grouted (FBLs)	<i>SS-8</i>																																																							
# of batches prepared	<i>2</i>																																																							
<u>For each batch record:</u>																																																								
Quantity of water used (gal.)	<i>78 gal</i>																																																							
Quantity of cement used (lbs.)	<i>284 lbs</i>																																																							
Cement type	<i>Portland</i>																																																							
Quantity of bentonite used (lbs.)	<i>20 lbs</i>																																																							
Quantity of calcium chloride used (lbs.)																																																								
Volume of grout prepared (gal.)																																																								
Volume of grout used (gal.)	<i>80 gallon</i>																																																							
Depth (feet)	10	20	30	40	50																																																			
<p>COMMENTS:</p> <p style="font-size: 1.2em; margin-left: 20px;"><i>3 bollards</i></p> <p style="font-size: 1.2em; margin-left: 20px;"><i>Grout in place = 55'</i></p> <p style="font-size: 1.2em; margin-left: 20px;"><i>1 protective casing</i></p>		<p><small>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</small></p>																																																						

Drilling Contractor

Department Representative

3 bollards
Grout in place = 55'
1 protective casing

MW-55D
TD: 58.1
Grab: 55.8

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW57D</u>
Site Location: <u>SEAD - ASH LANDFILL</u>	Driller: <u>David Lyons</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Hillman</u>
Date: <u>1/26/2011</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="checkbox"/> <u>Grout in place</u></p> <p>Casing retrieved (feet) <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="checkbox"/> <u>0 - 33.2 ft</u></p> <p># of batches prepared <input type="checkbox"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/> <u>18</u></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u></p> <p>Cement type <input type="checkbox"/> <u>Typical Portland</u></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/></p>	
<p>COMMENTS: <u>Depth to water = 2.74 ft. failed</u> <u>Knocked out end plug. Loaded casing with</u> <u>grout. cut off stickup. Grout in place.</u> <u>Large grout plug. couldn't remove. cut casing</u> <u>at grade & grouted</u> <u>in place.</u></p>	

Drilling Contractor: Geologic North Star Department Representative: _____

* Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW-59</u>	
Site Location: <u>SEAD 8- ASH LAND FILL</u>	Driller: <u>Scott Breeds</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>	
	Date: <u>9/16/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing		
<u>CASING PULLING</u> Method employed Casing retrieved (feet) Casing type/dia. (in.)		
<u>CASE PERFORATING</u> Equipment used Number of perforations/foot Size of perforations Interval perforated		
<u>GROUTING</u> 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: <u>Depth to water = 4.27 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u>		* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MWT-11</u>
Site Location: <u>SEAD ASH LANDFILL</u>	Driller: <u>David Lion</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/20/10</u>
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<u>OVERDRILLING</u> Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing	
<u>CASING PULLING</u> Method employed Casing retrieved (feet) Casing type/dia. (in.)	
<u>CASE PERFORATING</u> Equipment used Number of perforations/foot Size of perforations Interval perforated	
<u>GROUTING</u> 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.)	
Grout, Pull, Grout 10 FT 2" PVC	
0-10.3 1	
18 2 bags Type 1 Portland 10 pounds	
11 gal	
COMMENTS: <u>Depth to water = 7.0 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u>	
* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.	

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW PT-11</u>																																																
Site Location: <u>SEAD - ASH LANDFILL</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/20/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>10 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-15.4 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>15 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>10 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-15.4 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>15 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: 4' Stick up Removed, 19.5' TOP TO TD, Soil, Grout hole, PULLED PVC WELL Riser, Left 5' of screen filled with grout, Bottom of Well, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>10 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-15.4 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>15 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.87 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top. Left 5' of screen in hole.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Sch. 40 PVC riser. Not threaded to screen. Push connection?

Department Representative

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW - PT-15</u>	
Site Location: <u>SEAD ASH LAND FILL</u>	Driller: <u>David Lion</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>	
	Date: <u>9/20/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled _____ Drilling Method(s) _____ Borehole Dia. (in.) _____ Temporary Casing Installed? (y/n) _____ Depth temporary casing installed _____ Casing type/dia. (in.) _____ Method of installing _____		
<u>CASING PULLING</u> Method employed <u>Grout, Pull, Grout</u> Casing retrieved (feet) <u>14.6 ft</u> Casing type/dia. (in.) <u>2" PVC</u>		
<u>CASE PERFORATING</u> Equipment used _____ Number of perforations/foot _____ Size of perforations _____ Interval perforated _____		
<u>GROUTING</u> Interval grouted (FBS) <u>1-16 ft</u> # of batches prepared <u>1</u> For each batch record: Quantity of water used (gal.) <u>18</u> Quantity of cement used (lbs.) <u>2 bags</u> Cement type <u>Type I Portland</u> Quantity of bentonite used (lbs.) <u>10 pounds</u> Quantity of calcium chloride used (lbs.) _____ Volume of grout prepared (gal.) _____ Volume of grout used (gal.) <u>16 gal.</u>		
COMMENTS: <u>Depth to water = 9.45 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top. No pad.</u>		
<small>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</small>		

Geologic North Star

Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Ash Landfill</u>	Well ID: <u>PT-21A</u>																																																
Site Location: <u>SEAD 6</u>	Driller:																																																
Drilling Company: <u>Geologic</u>	Inspector: <u>Matt G. Str</u>																																																
Date:																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Rig</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>20.4 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>PVC 2"</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBSL)</td><td><u>18.4 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td>For each batch record:</td><td></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18 gal</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>TYPE I</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>16 lbs</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>10 gal</u></td></tr> </table>	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 employed	<u>Rig</u>	Casing retrieved (feet)	<u>20.4 ft</u>	Casing type/dia. (in.)	<u>PVC 2"</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBSL)	<u>18.4 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18 gal</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>TYPE I</u>	Quantity of bentonite used (lbs.)	<u>16 lbs</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>10 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Rig</u>																																																
Casing retrieved (feet)	<u>20.4 ft</u>																																																
Casing type/dia. (in.)	<u>PVC 2"</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBSL)	<u>18.4 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18 gal</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>TYPE I</u>																																																
Quantity of bentonite used (lbs.)	<u>16 lbs</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>10 gal</u>																																																
<p>COMMENTS:</p> <p><u>Knocked out end cap, trimmed in grout, pulled entire PVC & riser topped off grout soil core</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor
Cosby pulled 20.4
pulled 3 ballards
protected casing & concrete

Department Representative
TCC 204
Interval 18.4
Vol = 15.9
PT-21A

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW PT-23</u>	
Site Location: <u>SEAD ASHLAND FILL</u>	Driller: <u>David Lyons</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>	
	Date: <u>9/20/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled _____ Drilling Method(s) _____ Borehole Dia. (in.) _____ Temporary Casing Installed? (y/n) _____ Depth temporary casing installed _____ Casing type/dia. (in.) _____ Method of installing _____		
<u>CASING PULLING</u> Method employed <u>Grout, Pull, Grout</u> Casing retrieved (feet) <u>10.5 ft</u> Casing type/dia. (in.) <u>2" PVC</u>		
<u>CASE PERFORATING</u> Equipment used _____ Number of perforations/foot _____ Size of perforations _____ Interval perforated _____		
<u>GROUTING</u> Interval grouted (FBLs) <u>1 - 7.7 ft</u> # of batches prepared <u>1</u> For each batch record: Quantity of water used (gal.) <u>18</u> Quantity of cement used (lbs.) <u>2 bags</u> Cement type <u>Type I Portland</u> Quantity of bentonite used (lbs.) <u>10 pounds</u> Quantity of calcium chloride used (lbs.) _____ Volume of grout prepared (gal.) _____ Volume of grout used (gal.) <u>7 gal.</u>		
COMMENTS: <u>Depth to water = NA NA ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u>		* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW PT-25</u>																																																
Site Location: <u>SEAD - ASH LANDFILL</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/20/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>12.1 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FMLS)</td><td><u>1 - 9.3 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>8 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>12.1 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FMLS)	<u>1 - 9.3 ft</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>8 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: 2.8 ft Stick up Removed, 12.1 ft TOP TO TD, Soil, PULLED PVC WELL, Grout, Bottom of Well, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>12.1 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FMLS)	<u>1 - 9.3 ft</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>8 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 9.63 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 4-1</u>																																																
Site Location: <u>SEAD 4</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/17/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>12.9 FT</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-10.7 FT</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>10 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>12.9 FT</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-10.7 FT</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>10 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>2.2' Stick up Removed</p> <p>12.9' TOP TO TD</p> <p>soil</p> <p>PULLED PVC WELL</p> <p>Grout</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>12.9 FT</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-10.7 FT</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>10 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.58 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: SEAD-4	Well ID: MW4-2																																																
Site Location: Munitions Wash out Facility	Driller:																																																
Drilling Company:	Inspector: McAllister																																																
Date:																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Interval Drilled</td><td style="width: 20%;"></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Method employed</td><td style="width: 20%;">pull</td></tr> <tr><td>Casing retrieved (feet)</td><td>5 ft</td></tr> <tr><td>Casing type/dia. (in.)</td><td>2" PVC</td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Equipment used</td><td style="width: 20%;"></td></tr> <tr><td>Number of perforations/foot</td><td>5 ft per</td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Interval grouted (FBLS)</td><td style="width: 20%;">3 ft</td></tr> <tr><td># of batches prepared</td><td>1</td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td>10 gallons</td></tr> <tr><td>Quantity of cement used (lbs.)</td><td>180 lbs</td></tr> <tr><td>Cement type</td><td>portland #1</td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td>10 lbs</td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td>10 gallons</td></tr> </table>	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 employed	pull	Casing retrieved (feet)	5 ft	Casing type/dia. (in.)	2" PVC	Equipment used		Number of perforations/foot	5 ft per	Size of perforations		Interval perforated		Interval grouted (FBLS)	3 ft	# of batches prepared	1	For each batch record:		Quantity of water used (gal.)	10 gallons	Quantity of cement used (lbs.)	180 lbs	Cement type	portland #1	Quantity of bentonite used (lbs.)	10 lbs	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	10 gallons	<p align="center">WELL SCHEMATIC*</p>
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 employed	pull																																																
Casing retrieved (feet)	5 ft																																																
Casing type/dia. (in.)	2" PVC																																																
Equipment used																																																	
Number of perforations/foot	5 ft per																																																
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLS)	3 ft																																																
# of batches prepared	1																																																
For each batch record:																																																	
Quantity of water used (gal.)	10 gallons																																																
Quantity of cement used (lbs.)	180 lbs																																																
Cement type	portland #1																																																
Quantity of bentonite used (lbs.)	10 lbs																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	10 gallons																																																
<p>COMMENTS:</p> <p>Deband casing, Grout, pull casing, Remove perforator case top off grout</p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Drilling Contractor

Department Representative

pull casing

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW4-3</u>																																																
Site Location: <u>SEAD-4</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/21/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pul, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>11.4 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-9.2 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>9 gal</u></td></tr> </table>	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 employed	<u>Grout, Pul, Grout</u>	Casing retrieved (feet)	<u>11.4 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-9.2 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>9 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: 2.2 stick up removed, 11.4 TOP TO TD, Soil, PULLED PVC WELL, Grout, Bottom of well, NOT DRILLED</p>
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 employed	<u>Grout, Pul, Grout</u>																																																
Casing retrieved (feet)	<u>11.4 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-9.2 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>9 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 3.46 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW4-5</u>																																																
Site Location: <u>SEAD</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/17/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>84 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-5.9 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>6 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>84 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-5.9 ft</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>6 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>84 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-5.9 ft</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>6 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.85 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW4-7</u>																																																
Site Location: <u>SEAD-4</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/17/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>8' 6"</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-6.4</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>6 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>8' 6"</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-6.4</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>6 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>8' 6"</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-6.4</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>6 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 6.34 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW4-9</u>																																																
Site Location: <u>SEAD 4</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/21/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>6.2 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>φ - 6.2</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>6 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>6.2 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>φ - 6.2</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>6 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Labels: Broken off stick up removed, PULLED PVC WELL, Grout, TOP TO TD, Soil, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>6.2 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>φ - 6.2</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>6 gal</u>																																																
<p>COMMENTS: <u>Depth to water = _____ ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW4-11</u>																																																
Site Location: <u>SEAD-4</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/21/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>11.5</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-8.5</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>8 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>11.5</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-8.5</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>8 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: 3' Stick up Removed, 11.5 TOP TO TD, Soil, PULLED PVC WELL, Grout, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>11.5</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-8.5</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>8 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.90 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW4-12</u>																																																
Site Location: <u>SEAD 4</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/17/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td> </td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td> </td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)		Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)		# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>2.4 Stick up Removed</p> <p>13.62 TOP TO TD</p> <p>Soil</p> <p>Grout</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)																																																	
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)																																																	
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p>COMMENTS: <u>Depth to water = 9.62 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW4-13</u>	
Site Location: <u>SEAD 4</u>	Driller: <u>Joe Marzell</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>	
	Date: <u>9/22/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled <input type="checkbox"/> Drilling Method(s) <input type="checkbox"/> Borehole Dia. (in.) <input type="checkbox"/> Temporary Casing Installed? (y/n) <input type="checkbox"/> Depth temporary casing installed <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/> Method of installing <input type="checkbox"/>		
<u>CASING PULLING</u> Method employed <u>GROUT, PUL, GROUT</u> Casing retrieved (feet) <u>9 ft</u> Casing type/dia. (in.) <u>2" PVC</u>		
<u>CASE PERFORATING</u> Equipment used <input type="checkbox"/> Number of perforations/foot <input type="checkbox"/> Size of perforations <input type="checkbox"/> Interval perforated <input type="checkbox"/>		
<u>GROUTING</u> Interval grouted (FBLs) <u>1 = 6.4</u> # of batches prepared <u>1</u> For each batch record: Quantity of water used (gal.) <u>18</u> Quantity of cement used (lbs.) <u>2 bags</u> Cement type <u>Type I Portland</u> Quantity of bentonite used (lbs.) <u>10 pounds</u> Quantity of calcium chloride used (lbs.) <input type="checkbox"/> Volume of grout prepared (gal.) <input type="checkbox"/> Volume of grout used (gal.) <u>6 gal</u>		
COMMENTS: <u>Depth to water = 6.34 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u>		
* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.		

Geologic North Star
 Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 5-2</u>
Site Location: <u>SEAD 5</u>	Driller: <u>Steve Laramée</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
Date: <u>9/24/10</u>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="checkbox"/> <u>Grout, Pull, Grout</u></p> <p>Casing retrieved (feet) <input type="checkbox"/> <u>12 ft</u></p> <p>Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="checkbox"/> <u>1-9.4</u></p> <p># of batches prepared <input type="checkbox"/> <u>1</u></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/> <u>18</u></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u></p> <p>Cement type <input type="checkbox"/> <u>Type I Portland</u></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/> <u>9 gal.</u></p>	<p align="center">WELL SCHEMATIC*</p>
<p>COMMENTS: <u>Depth to water = 6.88 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW 11-1</u>																																																
Site Location: <u>SEAD-11</u>	Driller: <u>David Lyons</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Hillman</u>																																																
Date: <u>1/25/2011</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Interval Drilled</td><td style="width: 20%;"></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p>CASING PULLING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Method employed</td><td style="width: 20%;">grout pull grout</td></tr> <tr><td>Casing retrieved (feet)</td><td>16.6 ft</td></tr> <tr><td>Casing type/dia. (in.)</td><td>2" PVC</td></tr> </table> <p>CASE PERFORATING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Equipment used</td><td style="width: 20%;"></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p>GROUTING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Interval grouted (FBLs)</td><td style="width: 20%;">0-13.8 ft</td></tr> <tr><td># of batches prepared</td><td></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td>18</td></tr> <tr><td>Quantity of cement used (lbs.)</td><td>2 bags</td></tr> <tr><td>Cement type</td><td>Typical Portland</td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td>10 pounds</td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td></td></tr> </table>	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 employed	grout pull grout	Casing retrieved (feet)	16.6 ft	Casing type/dia. (in.)	2" PVC	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	0-13.8 ft	# of batches prepared		For each batch record:		Quantity of water used (gal.)	18	Quantity of cement used (lbs.)	2 bags	Cement type	Typical Portland	Quantity of bentonite used (lbs.)	10 pounds	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15</p> <p>Well Components: 2.8 ft stickup (Removed), 2" PVC casing, Grout (0-16.6 ft), NOT DRILLED (below 13.8 ft)</p>
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 employed	grout pull grout																																																
Casing retrieved (feet)	16.6 ft																																																
Casing type/dia. (in.)	2" PVC																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	0-13.8 ft																																																
# of batches prepared																																																	
For each batch record:																																																	
Quantity of water used (gal.)	18																																																
Quantity of cement used (lbs.)	2 bags																																																
Cement type	Typical Portland																																																
Quantity of bentonite used (lbs.)	10 pounds																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p>COMMENTS: <u>Depth to water = 4.6 ft. from TC</u> <u>Knocked out end plug. Loaded casing with</u> <u>grout. Pulled casing. Topped off hole with</u> <u>grout. Recovered all casing.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

11-2

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

WELL DECOMMISSIONING RECORD	
Site Name:	Well ID: <u>MW 11-2</u>
Site Location: <u>SEAD 11</u>	Driller:
Drilling Company:	Inspector:
Date:	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="text" value="Pull"/></p> <p>Casing retrieved (feet) <input type="text" value="8.5"/></p> <p>Casing type/dia. (in.) <input pvc"="" type="text" value="2"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="text" value="8.5 ft"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="18 gallons"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="188 lbs"/></p> <p>Cement type <input type="text" value="Portland #1"/></p> <p>Quantity of bentonite used (lbs.) <input type="text" value="10 lbs"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text"/></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>2</p><hr/><p>4</p><hr/><p>6</p><hr/><p>8</p><hr/><p>10</p><hr/><p>12</p><hr/> </div> <div style="flex-grow: 1; border-left: 1px solid black; border-right: 1px solid black; position: relative;"> <div style="position: absolute; top: 0; right: 0; font-size: small;">SU=3E</div> <div style="position: absolute; top: 50%; right: 0; font-size: small;">8.5</div> </div> </div>
COMMENTS:	* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.
<p><u>Knowl cut end ply bentonite grout</u></p> <p><u>Pull Rise & PVC top off grout</u></p>	122

Drilling Contractor

Department Representative

1 protective casing
1 casing pulled
3 Bollards

12-2
8-5
WL 73

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW11-3</u>																																																
Site Location: <u>SEAD II</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/21/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>7.4 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1 - 7.4 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>7 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>7.4 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1 - 7.4 ft</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>7 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>7.4 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1 - 7.4 ft</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>7 gal</u>																																																
<p>COMMENTS: <u>Depth to water = NA ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name:	Well ID: <i>MW11-4</i>
Site Location:	Driller:
Drilling Company:	Inspector:
Date:	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="text"/></p> <p>Casing retrieved (feet) <input type="text" value="13ft pulled."/></p> <p>Casing type/dia. (in.) <input type="text" value="2"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLS) <input type="text" value="10ft"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="18 gallons"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="188 lbs"/></p> <p>Cement type <input type="text" value="Portland #1"/></p> <p>Quantity of bentonite used (lbs.) <input type="text" value="10 lbs"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text"/></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>2</p><hr/><p>4</p><hr/><p>6</p><hr/><p>8</p><hr/><p>10</p><hr/><p>12</p><hr/> </div> <div style="flex-grow: 1; border-left: 1px solid black; border-right: 1px solid black; position: relative;"> <div style="position: absolute; top: -20px; right: 0;">SU=2.5</div> <div style="position: absolute; right: -20px; top: 50%; transform: translateY(-50%);">10.5'</div> <div style="position: absolute; bottom: -20px; right: 0;">13ft</div> </div> </div>
COMMENTS:	* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.
<i>Knock out end cap, tremmie grout, pull PVC Top of grout Remove Ballard's crown Breakfill with soil.</i>	

Drilling Contractor

Department Representative

Casing pulled

*13.0
10.5*

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Construction Debris LF</u>	Well ID: <u>MW 11-5</u>																																																
Site Location: <u>SGAD-11</u>	Driller:																																																
Drilling Company: <u>Geologic NS</u>	Inspector:																																																
Date:																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>pulled</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>11 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td></td></tr> <tr><td># of batches prepared</td><td></td></tr> <tr><td>For each batch record:</td><td></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>180 lbs</u></td></tr> <tr><td>Cement type</td><td><u>Portland #1</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 lbs</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>10 gallons</u></td></tr> </table>	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 employed	<u>pulled</u>	Casing retrieved (feet)	<u>11 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)		# of batches prepared		For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>180 lbs</u>	Cement type	<u>Portland #1</u>	Quantity of bentonite used (lbs.)	<u>10 lbs</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>10 gallons</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>pulled</u>																																																
Casing retrieved (feet)	<u>11 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)																																																	
# of batches prepared																																																	
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>180 lbs</u>																																																
Cement type	<u>Portland #1</u>																																																
Quantity of bentonite used (lbs.)	<u>10 lbs</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>10 gallons</u>																																																
<p>COMMENTS:</p> <p><u>Knock out end cap, remove grout, pull casing PVC</u></p> <p><u>top off grout, remove bedrock, concrete pad</u></p> <p><u>Backfill</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Drilling Contractor

Department Representative

Casing pulled

11 ft total

18.5 ft

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW11-6</u>																																																
Site Location: <u>SEAD II</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/21/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>10.35 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLS)</td><td><u>1-8 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>7 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>10.35 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLS)	<u>1-8 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>7 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: <u>2.4</u> stick up removed, <u>10.35 ft</u> TOP TO TD, Soil, PULLED PVC WELL, Grout, Bottom of well, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>10.35 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLS)	<u>1-8 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>7 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 607 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW11-7</u>																																																
Site Location: <u>SEAD II</u>	Driller: <u>Daniel Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/21/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p>CASING PULLING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>7.6 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p>CASE PERFORATING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p>GROUTING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-5.4</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>5 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>7.6 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-5.4</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>5 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: 2.2 ft Stick up Removed, 7.6 ft Top to TD, Soil, PULLED PVC WELL, Grout, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>7.6 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-5.4</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>5 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.15 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW12A2</u>																																																
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/14/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout pull (grout)</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>13 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBS)</td><td><u>1-12 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>9</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>1 bag</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>5</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td></td></tr> </table>	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 employed	<u>Grout pull (grout)</u>	Casing retrieved (feet)	<u>13 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBS)	<u>1-12 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>9</u>	Quantity of cement used (lbs.)	<u>1 bag</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>5</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout pull (grout)</u>																																																
Casing retrieved (feet)	<u>13 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBS)	<u>1-12 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>9</u>																																																
Quantity of cement used (lbs.)	<u>1 bag</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>5</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p>COMMENTS: <u>Depth to water 8.28 feet from top</u> <u>Knocked off end caps. Tremie grouted casing.</u> <u>Pulled casing. Tremie grouted remaining</u> <u>borehole. Topped off upper hole with soil.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
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.

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MU12-A-3</u>	
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Willman</u>	
	Date: <u>9/14/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled <input type="checkbox"/> Drilling Method(s) <input type="checkbox"/> Borehole Dia. (in.) <input type="checkbox"/> Temporary Casing Installed? (y/n) <input type="checkbox"/> Depth temporary casing installed <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/> Method of installing <input type="checkbox"/>	<p style="position: absolute; top: 0; left: 0;">Depth (feet)</p> <p style="position: absolute; top: 10%; left: 10%;">1.9' stickup</p> <p style="position: absolute; top: 15%; left: 15%;">Tie to well bottom 16.4</p> <p style="position: absolute; top: 25%; left: 25%;">soil</p> <p style="position: absolute; top: 35%; left: 35%;">grout</p> <p style="position: absolute; top: 45%; left: 45%;">Pulled PVC casing</p> <p style="position: absolute; top: 55%; left: 55%;">Bottom of Well</p> <p style="position: absolute; top: 65%; left: 65%;">NOT Drilled</p>	
<u>CASING PULLING</u> Method employed <input type="checkbox"/> <u>Grout, pull, grout</u> Casing retrieved (feet) <input type="checkbox"/> <u>16.4 ft.</u> Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u>		
<u>CASE PERFORATING</u> Equipment used <input type="checkbox"/> Number of perforations/foot <input type="checkbox"/> Size of perforations <input type="checkbox"/> Interval perforated <input type="checkbox"/>		
<u>GROUTING</u> Interval grouted (FBLs) <input type="checkbox"/> <u>1-14.9 ft</u> # of batches prepared <input type="checkbox"/> <u>1</u> For each batch record: Quantity of water used (gal.) <input type="checkbox"/> <u>9</u> Quantity of cement used (lbs.) <input type="checkbox"/> <u>1 bag</u> Cement type <input type="checkbox"/> <u>Type 1 Portland</u> Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>5</u> Quantity of calcium chloride used (lbs.) <input type="checkbox"/> Volume of grout prepared (gal.) <input type="checkbox"/> Volume of grout used (gal.) <input type="checkbox"/>		
COMMENTS: <u>Depth to water to 9.54' TCC</u> <u>Knocked out end cap. Trench grouted casing</u> <u>Pulled casing. Trench grouted remaining</u> <u>hole. Topped off hole with soil.</u>		

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW12-B1</i>
Site Location: <i>MW12-B1 SEAD 12</i>	Driller: <i>Scott Breeds</i>
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>
	Date: <i>9/13/10</i>
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="text"/></p> <p>Casing retrieved (feet) <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="text"/></p> <p># of batches prepared <input type="text"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text"/></p> <p>Quantity of cement used (lbs.) <input type="text"/></p> <p>Cement type <input type="text"/></p> <p>Quantity of bentonite used (lbs.) <input type="text"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text"/></p>	
<p><u>COMMENTS:</u> <i>Depth to Water 12.01 feet TOC. Knocked out bottom plug. Filled casing with grout. Pulled casing. Tremie grouted remaining hole. Added soil above grout.</i></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW-82-B2</u>
Site Location: <u>SEAN 12</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/13/10</u>
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="checkbox"/> <u>Grout pull, grout</u></p> <p>Casing retrieved (feet) <input type="checkbox"/> <u>16'</u></p> <p>Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLS) <input type="checkbox"/> <u>#3-14'</u></p> <p># of batches prepared <input type="checkbox"/> <u>1</u></p> <p><u>For each batch record:</u></p> <p>Quantity of water used (gal.) <input type="checkbox"/> <u>18</u></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u></p> <p>Cement type <input type="checkbox"/> <u>Type 1 Portland</u></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/> <u>13 gal</u></p>	
<p><u>COMMENTS:</u> <u>depth to water 12.05' from TOC.</u> <u>Knocked out end plug. Tremie grouted casing.</u> <u>pulled casing. Tremie grouted remaining</u> <u>boring. Added soil above grout</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Drilling Contractor _____

Department Representative _____

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

WELL DECOMMISSIONING RECORD

Site Name: <i>Seneca Army Depot</i>	Well ID: MWB-3 MW12-B3
Site Location: <i>MW12-B3 Sead 12</i>	Driller: <i>Scott Breeds</i>
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>
	Date: <i>9/13/10</i>

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

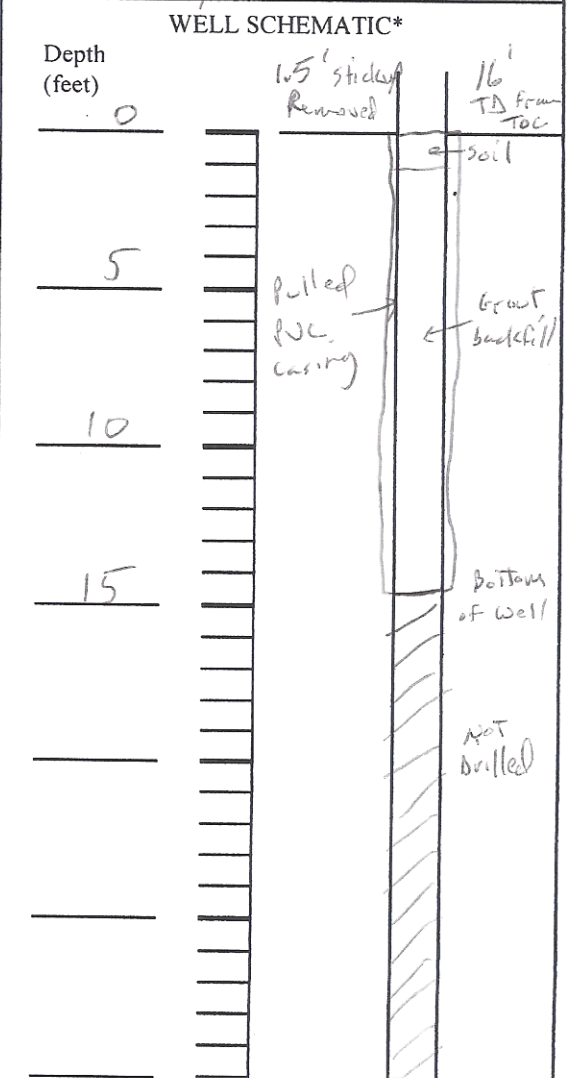
Method employed	<i>grout pull, grout</i>
Casing retrieved (feet)	<i>16 ft</i>
Casing type/dia. (in.)	<i>2" PVC</i>

CASE PERFORATING

Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	

GROUTING

Interval grouted (FBLs)	<i>1-14 ft.</i>
# of batches prepared	<i>1</i>
For each batch record:	
Quantity of water used (gal.)	<i>18</i>
Quantity of cement used (lbs.)	<i>2 bags</i>
Cement type	<i>Portland Type 1</i>
Quantity of bentonite used (lbs.)	<i>10 pounds</i>
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	<i>14 gal</i>



COMMENTS: *Depth to water 12.2' from TOC. Knocked out end cap. Tremie grouted casing with grout. Pulled casing. Tremie grouted remaining boring. Added soil above grout.*

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12-01</u>																																																
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Hillman</u>																																																
Date: <u>9/15/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>grout, pull, grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>11.4 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-9 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 quads</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>9 gal</u></td></tr> </table>	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 employed	<u>grout, pull, grout</u>	Casing retrieved (feet)	<u>11.4 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-9 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1</u>	Quantity of bentonite used (lbs.)	<u>10 quads</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>9 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>grout, pull, grout</u>																																																
Casing retrieved (feet)	<u>11.4 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-9 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1</u>																																																
Quantity of bentonite used (lbs.)	<u>10 quads</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>9 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 9.02 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining boring.</u> <u>Added soil on top.</u></p>																																																	

Geologic North Star,
Drilling Contractor

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12-02</u>																																																
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/15/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td style="width: 150px;"> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout Pull Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>8.6 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-6 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>8 gal</u></td></tr> </table>	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 employed	<u>Grout Pull Grout</u>	Casing retrieved (feet)	<u>8.6 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-6 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>8 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout Pull Grout</u>																																																
Casing retrieved (feet)	<u>8.6 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-6 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>8 gal</u>																																																
<p><u>COMMENTS:</u> <u>Depth to water 142' 7.75' ft. TAG</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining casing.</u> <u>Tagged off with seal</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 12-03</u>																																																
Site Location: <u>SEAN 12</u>	Driller: <u>Steve Laramel</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/15/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>12 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBS)</td><td><u>1-18'</u></td></tr> <tr><td># of batches prepared</td><td> </td></tr> <tr><td>For each batch record:</td><td> </td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>16 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>12 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBS)	<u>1-18'</u>	# of batches prepared		For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>16 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>12 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBS)	<u>1-18'</u>																																																
# of batches prepared																																																	
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>16 gal</u>																																																
<p>COMMENTS: <u>Depth to water 19.25' from TOC.</u> <u>Knocked out bottom plug. Loaded casing with</u> <u>grout. Pulled on casing. Retrieval - 6' riser and 4'</u> <u>of screen. Screen broke. Grout remaining borehole</u> <u>Added soil on top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 12-04</u>
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Gillman</u>
Date: <u>9/15/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="checkbox"/> <u>grout, pull, grout</u></p> <p>Casing retrieved (feet) <input type="checkbox"/> <u>14.4 ft</u></p> <p>Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="checkbox"/> <u>1-11.9 ft</u></p> <p># of batches prepared <input type="checkbox"/> <u>1</u></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/> <u>18</u></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u></p> <p>Cement type <input type="checkbox"/> <u>Type 1 Portland</u></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/> <u>12 gal</u></p>	<p>Depth (feet) scale: 0, 5, 10, 15, 20</p> <p>2.5' grout removal</p> <p>14.4' top to TD</p> <p>Soil</p> <p>Grout</p> <p>pulled PVC well</p> <p>Bottom of Well</p> <p>NOT DRILLED</p>
<p>COMMENTS: <u>Depth to water 7.6 ft from TOC</u></p> <p><u>Knocked off end cap, loaded casing with grout.</u></p> <p><u>Pulled well casing, grouted remaining boring.</u></p> <p><u>Add soil on top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12-05</u>
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
Date: <u>9/15/10</u>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <u>grout soil grout</u></p> <p>Casing retrieved (feet) <u>17.1 ft</u></p> <p>Casing type/dia. (in.) <u>2" PVC</u></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <u>1-18.1ft</u></p> <p># of batches prepared <u>1</u></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <u>18 gal</u></p> <p>Quantity of cement used (lbs.) <u>2 bags</u></p> <p>Cement type <u>Type 1 Per Head</u></p> <p>Quantity of bentonite used (lbs.) <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <u>18 gal</u></p>	<p align="center">WELL SCHEMATIC*</p>
<p>COMMENTS: <u>Drift to water - 11.7 ft from TOC</u></p> <p><u>Knocked off end cap. Loaded casing with grout.</u></p> <p><u>Pulled casing. Screen broken. Left = 3.5 ft of screen.</u></p> <p><u>Grouted remaining boring. Added soil on top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW12-6</u>
Site Location: <u>SEAD-12</u>	Driller: <u>David Lyons</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
Date: <u>1/25/2011</u>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p>CASING PULLING</p> <p>Method employed <input type="checkbox"/> <u>1 crack, grout, pull, grout</u></p> <p>Casing retrieved (feet) <input type="checkbox"/> <u>11.6'</u></p> <p>Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u></p> <p>CASE PERFORATING</p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p>GROUTING</p> <p>Interval grouted (FBLs) <input type="checkbox"/> <u>0-11.6 ft</u></p> <p># of batches prepared <input type="checkbox"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/> <u>18</u></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u></p> <p>Cement type <input type="checkbox"/> <u>Type 1 Portland</u></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>3' stickup Removed</p> <p>TOP TO TD</p> <p>11.6'</p> <p>Grout</p> <p>11.6</p> <p>NOT DRILLED</p> <p>Pulled PVC casing 2"</p>
<p>COMMENTS: <u>Depth to water = 4.50 ft. from TC</u> <u>Knocked out end plug. Loaded casing with grout. Pulled casing out. Recovered all. Topped off grout. Picked up site.</u></p>	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <i>Seneca, SEAD 12</i>	Well ID: <i>MW 12-09</i>
Site Location: <i>←</i>	Driller: <i>Scott Breeds</i>
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>
Date: <i>12/13/10</i>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="text" value="Grout pull, Grout"/></p> <p>Casing retrieved (feet) <input type="text" value="16.6"/></p> <p>Casing type/dia. (in.) <input pvc"="" type="text" value="2"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLS) <input type="text" value="1-13.8'"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="18"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="2 bags"/></p> <p>Cement type <input type="text" value="Type 1"/></p> <p>Quantity of bentonite used (lbs.) <input type="text" value="10 pounds"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text" value="~13"/></p>	<p align="center">WELL SCHEMATIC*</p>
<p>COMMENTS: <i>Depth to water 12.52 TOC</i></p> <p><i>Knocked out end cap. Loaded casing with grout. Pulled ground pipe and pulled PVC riser and screens.</i></p> <p><i>Tremie grouted remaining borehole. Added soil above grout.</i></p>	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD

Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW-12-16</u>
Site Location: <u>MW12-16 SEAD 12</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/13/10</u>

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

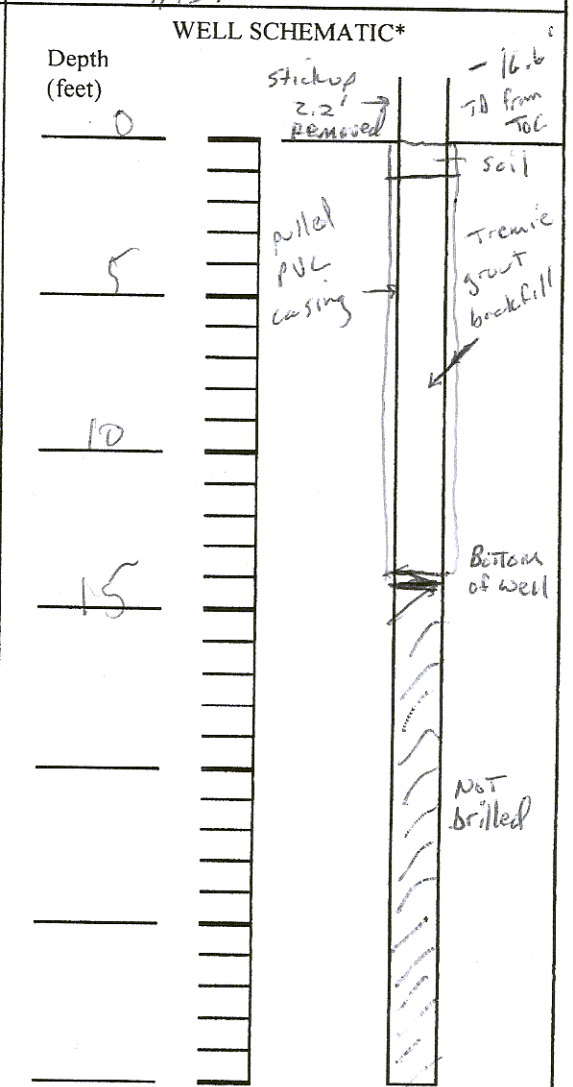
Method employed	<u>Grout, pull, Grout</u>
Casing retrieved (feet)	<u>16.6'</u>
Casing type/dia. (in.)	<u>2" PVC</u>

CASE PERFORATING

Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	

GROUTING

Interval grouted (FBLs)	<u>1-14'</u>
# of batches prepared	<u>1</u>
For each batch record:	
Quantity of water used (gal.)	<u>18</u>
Quantity of cement used (lbs.)	<u>2 bags</u>
Cement type	
Quantity of bentonite used (lbs.)	<u>10 pounds</u>
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	<u>14 gal.</u>



COMMENTS: Depth to water 12.03
Push out bottom plug. Load casing with grout.
Pulled casing. Tremie grouted additional grout.
Added soil above grout.

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
 Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW12-17</u>																																																
Site Location: <u>MW12-17 SEAD 12</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>North Star - Geologic</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/13/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>21.2'</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-18'</u></td></tr> <tr><td># of batches prepared</td><td><u>1+1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>18 gal</u></td></tr> </table>	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 employed	<u>Grout Pull, Grout</u>	Casing retrieved (feet)	<u>21.2'</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-18'</u>	# of batches prepared	<u>1+1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>18 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout Pull, Grout</u>																																																
Casing retrieved (feet)	<u>21.2'</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-18'</u>																																																
# of batches prepared	<u>1+1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>18 gal</u>																																																
<p><u>COMMENTS:</u> <u>Depth to water 14-12' TOC</u> <u>knocks out bottom plug. Load casing with grout. Pulled</u> <u>casing. Tremie grouted rest of hole. Topped off</u> <u>with second batch of grout. Added soil above grout</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
 Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12-18</u>
Site Location: <u>MW12-18 SEAN 12</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
Date: <u>9/13/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <u>grout, pull, grout</u></p> <p>Casing retrieved (feet) <u>17'</u></p> <p>Casing type/dia. (in.) <u>PVC 2"</u></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLS) <u>1-17'</u></p> <p># of batches prepared <u>1</u></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <u>18</u></p> <p>Quantity of cement used (lbs.) <u>2 bags</u></p> <p>Cement type <u>Type 1 portland</u></p> <p>Quantity of bentonite used (lbs.) <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <u>17 gal</u></p>	
<p><u>COMMENTS:</u> <u>Depth to water 14.3' from TOC</u> <u>Knocked out bottom plug. Loaded casing with grout.</u> <u>Pulled casing. Tremie grouted remaining hole.</u> <u>Added soil above grout.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12-19</u>
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/14/10</u>
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <u>Grout, pull, grout</u></p> <p>Casing retrieved (feet) <u>13.3 ft</u></p> <p>Casing type/dia. (in.) <u>2" PVC</u></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBS) <u>1-10.4 ft</u></p> <p># of batches prepared <u>1</u></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <u>18</u></p> <p>Quantity of cement used (lbs.) <u>2 bags</u></p> <p>Cement type <u>Type 1</u></p> <p>Quantity of bentonite used (lbs.) <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <u>11 gal</u></p>	
<p><u>COMMENTS:</u> <u>Depth to water = 7.56 from T.O.</u> <u>Knocked end plug off. Loaded casing full of</u> <u>grout. Pulled casing. Grouted remaining</u> <u>hole. Added soil at top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12-20</u>																																																
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/14/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>16.9</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-14.2'</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>14 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>16.9</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-14.2'</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1</u>	Quantity of bentonite used (lbs.)	<u>10</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>14 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>16.9</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-14.2'</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1</u>																																																
Quantity of bentonite used (lbs.)	<u>10</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>14 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.22' from TOC. Knocked end cap off. Loaded casing with grout. Pulled casing. Grouted remaining boring. Added soil on top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12-21</u>																																																
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
	Date: <u>9/19/10</u>																																																
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 60%;">Interval Drilled</td><td style="width: 40%; border: 1px solid black; height: 15px;"></td></tr> <tr><td>Drilling Method(s)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Borehole Dia. (in.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Depth temporary casing installed</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Casing type/dia. (in.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Method of installing</td><td style="border: 1px solid black; height: 15px;"></td></tr> </table> <p><u>CASING PULLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 60%;">Method employed</td><td style="width: 40%; border: 1px solid black; padding: 2px;"><u>grout, pull, grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td style="border: 1px solid black; padding: 2px;"><u>14 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td style="border: 1px solid black; padding: 2px;"><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 60%;">Equipment used</td><td style="width: 40%; border: 1px solid black; height: 15px;"></td></tr> <tr><td>Number of perforations/foot</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Size of perforations</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Interval perforated</td><td style="border: 1px solid black; height: 15px;"></td></tr> </table> <p><u>GROUTING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 60%;">Interval grouted (FBLs)</td><td style="width: 40%; border: 1px solid black; padding: 2px;"><u>1-11.2 ft</u></td></tr> <tr><td># of batches prepared</td><td style="border: 1px solid black; padding: 2px;"><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td style="border: 1px solid black; padding: 2px;"><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td style="border: 1px solid black; padding: 2px;"><u>2 bags</u></td></tr> <tr><td>Cement type</td><td style="border: 1px solid black; padding: 2px;"><u>Type 1</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td style="border: 1px solid black; padding: 2px;"><u>10</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td style="border: 1px solid black; height: 15px;"></td></tr> <tr><td>Volume of grout used (gal.)</td><td style="border: 1px solid black; padding: 2px;"><u>12 gal</u></td></tr> </table>	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 employed	<u>grout, pull, grout</u>	Casing retrieved (feet)	<u>14 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-11.2 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1</u>	Quantity of bentonite used (lbs.)	<u>10</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>12 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>grout, pull, grout</u>																																																
Casing retrieved (feet)	<u>14 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-11.2 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1</u>																																																
Quantity of bentonite used (lbs.)	<u>10</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>12 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 3 ft from TOC</u> <u>Knocked off end cap. Loaded casing with</u> <u>grout. Pulled casing. Grouted remaining</u> <u>borehole. Add soil on top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MAW12-22</i>
Site Location: <i>SEAD12</i>	Driller: <i>Scott Brooks</i>
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>
Date: <i>9/14/10</i>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="checkbox"/> <i>Grout Pull Grout</i></p> <p>Casing retrieved (feet) <input type="checkbox"/> <i>15.8'</i></p> <p>Casing type/dia. (in.) <input type="checkbox"/> <i>2" PVC</i></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBS) <input type="checkbox"/> <i>1-13 ft.</i></p> <p># of batches prepared <input type="checkbox"/> <i>1</i></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/> <i>18</i></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/> <i>2 bags</i></p> <p>Cement type <input type="checkbox"/> <i>Type 1</i></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/> <i>10</i></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/> <i>13 gals.</i></p>	<p align="center">WELL SCHEMATIC*</p>
<p>COMMENTS: <i>Depth to water 9.35 from TOC</i></p> <p><i>Knocked off end cap. Filled casing with grout.</i></p> <p><i>Pulled casing. Filled remaining hole with grout.</i></p> <p><i>Put soil to surface.</i></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW12-23</u>
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
Date: <u>9/14/10</u>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="text"/></p> <p>Casing retrieved (feet) <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="text" value="1-13.8'"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="18"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="2 bags"/></p> <p>Cement type <input type="text" value="Type 1"/></p> <p>Quantity of bentonite used (lbs.) <input type="text" value="10"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text" value="14 gallons"/></p>	<p align="center">WELL SCHEMATIC*</p>
<p>COMMENTS: <u>Depth to water 8.8 ft from TOC.</u></p> <p><u>Knocked off end cap. Tremied grout into casing.</u></p> <p><u>Pulled casing. Added more grout to borehole</u></p> <p><u>Added soil to top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW12-24</i>
Site Location: <i>SEAD 12</i>	Driller: <i>Scott Breeds</i>
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>
Date: <i>9/15/10</i>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="text" value="Grout, Pull, Grout"/></p> <p>Casing retrieved (feet) <input type="text" value="12.7 ft"/></p> <p>Casing type/dia. (in.) <input pvc"="" type="text" value="2"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBS) <input type="text" value="1-11.1 ft"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="18"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="2 bags"/></p> <p>Cement type <input type="text" value="Type 1"/></p> <p>Quantity of bentonite used (lbs.) <input type="text" value="10 pounds"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text" value="11 gal."/></p>	<p align="center">WELL SCHEMATIC*</p>
<p>COMMENTS: <i>Depth to water 10.27 from TOC. Knacked off end cap. Loaded casing with grout. Pulled casing. Grouted remaining borehole with grout. Add soil at top.</i></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW12-25</i>																																																
Site Location: <i>SEAA 12</i>	Driller: <i>Scott Breeds</i>																																																
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>																																																
Date: <i>9/15/10</i>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><i>Grout, pull, Grout</i></td></tr> <tr><td>Casing retrieved (feet)</td><td><i>13.7 ft</i></td></tr> <tr><td>Casing type/dia. (in.)</td><td><i>2" PVC</i></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><i>1 - 10.8'</i></td></tr> <tr><td># of batches prepared</td><td><i>1</i></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><i>18</i></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><i>2 bags</i></td></tr> <tr><td>Cement type</td><td><i>Type 1</i></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><i>10</i></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><i>11 gal</i></td></tr> </table>	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 employed	<i>Grout, pull, Grout</i>	Casing retrieved (feet)	<i>13.7 ft</i>	Casing type/dia. (in.)	<i>2" PVC</i>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<i>1 - 10.8'</i>	# of batches prepared	<i>1</i>	For each batch record:		Quantity of water used (gal.)	<i>18</i>	Quantity of cement used (lbs.)	<i>2 bags</i>	Cement type	<i>Type 1</i>	Quantity of bentonite used (lbs.)	<i>10</i>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<i>11 gal</i>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15</p> <p>Annotations: <i>stickup 2.9 removed</i>, <i>13.7 Top to FD</i>, <i>Soil</i>, <i>Grout</i>, <i>pulled PVC well</i>, <i>Bottom of well</i>, <i>Not Drilled</i></p>
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 employed	<i>Grout, pull, Grout</i>																																																
Casing retrieved (feet)	<i>13.7 ft</i>																																																
Casing type/dia. (in.)	<i>2" PVC</i>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<i>1 - 10.8'</i>																																																
# of batches prepared	<i>1</i>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<i>18</i>																																																
Quantity of cement used (lbs.)	<i>2 bags</i>																																																
Cement type	<i>Type 1</i>																																																
Quantity of bentonite used (lbs.)	<i>10</i>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<i>11 gal</i>																																																
<p>COMMENTS: <i>Depth to water = 9.64 from TOC. Knocked out end cap. Loaded casing with grout, pulled casing. Grouted remaining borehole. Added soil to top.</i></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW-12-26</u>																																																
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/15/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout pull, grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>13.5 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-11 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>11 gallons</u></td></tr> </table>	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 employed	<u>Grout pull, grout</u>	Casing retrieved (feet)	<u>13.5 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-11 ft</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>11 gallons</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout pull, grout</u>																																																
Casing retrieved (feet)	<u>13.5 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-11 ft</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>11 gallons</u>																																																
<p><u>COMMENTS:</u> <u>Depth to water = 9.55 ft. from TOC</u> <u>Knocked off end cap. Loaded casing with grout.</u> <u>Pulled casing, grouted remaining borehole.</u> <u>Added soil at top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MLD12-27</u>																																																
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
	Date: <u>9/14/10</u>																																																
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Interval Drilled</td><td style="width: 60%;"><input type="checkbox"/></td></tr> <tr><td>Drilling Method(s)</td><td><input type="checkbox"/></td></tr> <tr><td>Borehole Dia. (in.)</td><td><input type="checkbox"/></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td><input type="checkbox"/></td></tr> <tr><td>Depth temporary casing installed</td><td><input type="checkbox"/></td></tr> <tr><td>Casing type/dia. (in.)</td><td><input type="checkbox"/></td></tr> <tr><td>Method of installing</td><td><input type="checkbox"/></td></tr> </table> <p><u>CASING PULLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Method employed</td><td style="width: 60%;"><u>Grout, pull/grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>12.8 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Equipment used</td><td style="width: 60%;"><input type="checkbox"/></td></tr> <tr><td>Number of perforations/foot</td><td><input type="checkbox"/></td></tr> <tr><td>Size of perforations</td><td><input type="checkbox"/></td></tr> <tr><td>Interval perforated</td><td><input type="checkbox"/></td></tr> </table> <p><u>GROUTING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Interval grouted (FBLS)</td><td style="width: 60%;"><u>1 - 9.7 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18 gal</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td><input type="checkbox"/></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td><input type="checkbox"/></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>10 gal</u></td></tr> </table>	Interval Drilled	<input type="checkbox"/>	Drilling Method(s)	<input type="checkbox"/>	Borehole Dia. (in.)	<input type="checkbox"/>	Temporary Casing Installed? (y/n)	<input type="checkbox"/>	Depth temporary casing installed	<input type="checkbox"/>	Casing type/dia. (in.)	<input type="checkbox"/>	Method of installing	<input type="checkbox"/>	Method employed	<u>Grout, pull/grout</u>	Casing retrieved (feet)	<u>12.8 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used	<input type="checkbox"/>	Number of perforations/foot	<input type="checkbox"/>	Size of perforations	<input type="checkbox"/>	Interval perforated	<input type="checkbox"/>	Interval grouted (FBLS)	<u>1 - 9.7 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18 gal</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1</u>	Quantity of bentonite used (lbs.)	<u>10</u>	Quantity of calcium chloride used (lbs.)	<input type="checkbox"/>	Volume of grout prepared (gal.)	<input type="checkbox"/>	Volume of grout used (gal.)	<u>10 gal</u>	<p align="center">WELL SCHEMATIC*</p>
Interval Drilled	<input type="checkbox"/>																																																
Drilling Method(s)	<input type="checkbox"/>																																																
Borehole Dia. (in.)	<input type="checkbox"/>																																																
Temporary Casing Installed? (y/n)	<input type="checkbox"/>																																																
Depth temporary casing installed	<input type="checkbox"/>																																																
Casing type/dia. (in.)	<input type="checkbox"/>																																																
Method of installing	<input type="checkbox"/>																																																
Method employed	<u>Grout, pull/grout</u>																																																
Casing retrieved (feet)	<u>12.8 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used	<input type="checkbox"/>																																																
Number of perforations/foot	<input type="checkbox"/>																																																
Size of perforations	<input type="checkbox"/>																																																
Interval perforated	<input type="checkbox"/>																																																
Interval grouted (FBLS)	<u>1 - 9.7 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18 gal</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1</u>																																																
Quantity of bentonite used (lbs.)	<u>10</u>																																																
Quantity of calcium chloride used (lbs.)	<input type="checkbox"/>																																																
Volume of grout prepared (gal.)	<input type="checkbox"/>																																																
Volume of grout used (gal.)	<u>10 gal</u>																																																
<p>COMMENTS: <u>Depth to water 9.6 from TOC</u> <u>Knocked off end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining hole.</u> <u>Added soil out top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12-29</u>																																																
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/14/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout pull/grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>16.8 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-13.8 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>14</u></td></tr> </table>	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 employed	<u>Grout pull/grout</u>	Casing retrieved (feet)	<u>16.8 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-13.8 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1</u>	Quantity of bentonite used (lbs.)	<u>10</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>14</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout pull/grout</u>																																																
Casing retrieved (feet)	<u>16.8 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-13.8 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1</u>																																																
Quantity of bentonite used (lbs.)	<u>10</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>14</u>																																																
<p>COMMENTS: <u>Depth to water 10' from TOC</u> <u>Knocked out end cap. Traced casing full of grout.</u> <u>Pulled casing. Traced remaining borehole with</u> <u>grout. Tapped off hole with soil.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12-30</u>
Site Location: <u>SEAD 12 J</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/14/10</u>
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="checkbox"/> <u>Grout full, Grout</u></p> <p>Casing retrieved (feet) <input type="checkbox"/> <u>16.8 feet</u></p> <p>Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="checkbox"/> <u>1-14'</u></p> <p># of batches prepared <input type="checkbox"/> <u>1</u></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/> <u>18</u></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u></p> <p>Cement type <input type="checkbox"/> <u>Type 1</u></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/> <u>14</u></p>	
<p><u>COMMENTS:</u> <u>Depth to water 9.8' from TOC</u> <u>Knock off end cap. Treated casing full of grout.</u> <u>Pulled casing. Treated remaining borehole with</u> <u>grout. Added soil to upper feet.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW12-31</i>
Site Location: <i>SEAA 12</i>	Driller: <i>Scott Breeds</i>
Drilling Company: <i>Geologic Northstar</i>	Inspector: <i>Scott Dillman</i>
	Date: <i>9/14/10</i>
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<u>OVERDRILLING</u>	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"> <p>Depth (feet)</p> <p style="text-align: center;"><i>0</i></p> <hr style="width: 50%; margin: 5px auto;"/> <p style="text-align: center;"><i>5</i></p> <hr style="width: 50%; margin: 5px auto;"/> <p style="text-align: center;"><i>10</i></p> <hr style="width: 50%; margin: 5px auto;"/> <p style="text-align: center;"><i>15</i></p> <hr style="width: 50%; margin: 5px auto;"/> </div> <div style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px; position: relative;"> <p style="position: absolute; top: -20px; left: 50%; transform: translate(-50%, -50%); font-size: small;">stickup 3 removed</p> <p style="position: absolute; top: 100px; left: 50%; transform: translate(-50%, -50%); font-size: small;">pulled PVC well</p> <p style="position: absolute; top: 130px; left: 50%; transform: translate(-50%, -50%); font-size: small;">13' Top to TD Soil</p> <p style="position: absolute; top: 130px; right: 50%; transform: translate(50%, -50%); font-size: small;">Grout</p> </div> </div>
Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	
<u>CASING PULLING</u>	
Method employed	
Casing retrieved (feet)	<i>13 ft</i>
Casing type/dia. (in.)	<i>2" PVC</i>
<u>CASE PERFORATING</u>	
Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	
<u>GROUTING</u>	
Interval grouted (FBS)	<i>0-10 ft</i>
# of batches prepared	<i>1</i>
For each batch record:	
Quantity of water used (gal.)	<i>18</i>
Quantity of cement used (lbs.)	<i>2 bags</i>
Cement type	<i>Type 1</i>
Quantity of bentonite used (lbs.)	<i>10</i>
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	<i>10 gallons</i>
<u>COMMENTS:</u> <i>Depth to water = 8.5' from TDC</i>	
<i>Knocked off end plug. Loaded casing with Grout</i>	
<i>Pulled casing. Grouted remaining boring</i>	
<i>Added soil on top.</i>	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic Northstar
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW12-32</i>
Site Location: <i>SEAD 12</i>	Driller: <i>Scott Breeds</i>
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dittman</i>
Date: <i>9/14/10</i>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="text" value="Grout pull, grout"/></p> <p>Casing retrieved (feet) <input type="text" value="13.1 ft"/></p> <p>Casing type/dia. (in.) <input puc"="" type="text" value="2\"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBS) <input type="text" value="1-10.4"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="18"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="2 bags"/></p> <p>Cement type <input type="text" value="Type 1"/></p> <p>Quantity of bentonite used (lbs.) <input type="text" value="10 pounds"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text" value="11 gal"/></p>	<p align="center">WELL SCHEMATIC*</p>
<p><u>COMMENTS:</u> <i>depth to water = 7.76 ft. from TOC</i> <i>Knocked out end plug. Loaded casing with grout. pulled well. Grouted remaining borehole. Topped off with soil.</i></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW12-35</u>	
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>	
	Date: <u>9/13/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled <input type="checkbox"/> Drilling Method(s) <input type="checkbox"/> Borehole Dia. (in.) <input type="checkbox"/> Temporary Casing Installed? (y/n) <input type="checkbox"/> Depth temporary casing installed <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/> Method of installing <input type="checkbox"/>		
<u>CASING PULLING</u> Method employed <input type="checkbox"/> Casing retrieved (feet) <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/>		
<u>CASE PERFORATING</u> Equipment used <input type="checkbox"/> Number of perforations/foot <input type="checkbox"/> Size of perforations <input type="checkbox"/> Interval perforated <input type="checkbox"/>		
<u>GROUTING</u> - GROUT IN PLACE Interval grouted (FBLs) <input type="checkbox"/> <u>2-38 ft</u> # of batches prepared <input type="checkbox"/> <u>1</u> For each batch record: Quantity of water used (gal.) <input type="checkbox"/> <u>18</u> Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u> Cement type <input type="checkbox"/> <u>Type 1 Portland</u> Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 pounds</u> Quantity of calcium chloride used (lbs.) <input type="checkbox"/> Volume of grout prepared (gal.) <input type="checkbox"/> Volume of grout used (gal.) <input type="checkbox"/>		
COMMENTS: <u>Depth to water 13.4 ft. from TOC</u> <u>Tremie grouted casing to ~3 ft.</u> <u>Dig out upper casing and stickup.</u> <u>Backfill upper hole with soil.</u>		

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW12-38</i>
Site Location: <i>SEAD 12</i>	Driller: <i>Scott Breeds</i>
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>
	Date: <i>9/14/10</i>
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="text" value="grout, pull, grout"/></p> <p>Casing retrieved (feet) <input type="text" value="10.5"/></p> <p>Casing type/dia. (in.) <input pvc"="" type="text" value="2\"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBS) <input type="text" value="0-10.5"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="18"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="2 bags"/></p> <p>Cement type <input type="text" value="Type 1"/></p> <p>Quantity of bentonite used (lbs.) <input type="text" value="10"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text" value="10 gal"/></p>	<p>Depth (feet): 0, 5, 10, 10.5</p> <p>Labels: Flush mount, pulled PVC well, Filled curb box to surface, Grout to surface, Bottom of Well, NOT DRILLED</p>
<p><u>COMMENTS:</u> <i>Depth to water 4.64 from TOC. Loaded casing with grout. Pulled casing. Finished back filling borehole with grout to near surface. Filled in curb box with grout. Put curb box lid back on. Knocked off bottom plug before adding grout.</i></p>	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor: Geologic North Star Department Representative: _____

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW12-39</i>																																																
Site Location: <i>SEAD 12</i>	Driller: <i>Scott Breeds</i>																																																
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>																																																
Date: <i>9/14/10</i>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><i>Grout Pull Grout</i></td></tr> <tr><td>Casing retrieved (feet)</td><td><i>10.2</i></td></tr> <tr><td>Casing type/dia. (in.)</td><td><i>2" PVC</i></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><i>0-10.2</i></td></tr> <tr><td># of batches prepared</td><td><i>1</i></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><i>18</i></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><i>2</i></td></tr> <tr><td>Cement type</td><td><i>Type 1</i></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><i>10</i></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><i>10 gal</i></td></tr> </table>	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 employed	<i>Grout Pull Grout</i>	Casing retrieved (feet)	<i>10.2</i>	Casing type/dia. (in.)	<i>2" PVC</i>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<i>0-10.2</i>	# of batches prepared	<i>1</i>	<u>For each batch record:</u>		Quantity of water used (gal.)	<i>18</i>	Quantity of cement used (lbs.)	<i>2</i>	Cement type	<i>Type 1</i>	Quantity of bentonite used (lbs.)	<i>10</i>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<i>10 gal</i>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<i>Grout Pull Grout</i>																																																
Casing retrieved (feet)	<i>10.2</i>																																																
Casing type/dia. (in.)	<i>2" PVC</i>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<i>0-10.2</i>																																																
# of batches prepared	<i>1</i>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<i>18</i>																																																
Quantity of cement used (lbs.)	<i>2</i>																																																
Cement type	<i>Type 1</i>																																																
Quantity of bentonite used (lbs.)	<i>10</i>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<i>10 gal</i>																																																
<p>COMMENTS: <i>Depth to water 2.8 ft from TOC Knocked out end cap. Filled casing with grout. Pulled casing. Filled remaining borehole with grout to near surface. Filled flush mount to 0 Replace flush mount cover <i>Geologic North Star.</i></i></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12-40</u>																																																
Site Location: <u>SEAD 12</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/14/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td style="width: 100px;"> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td style="width: 100px;"><u>Grout, pull, grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>13.4 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td style="width: 100px;"> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td style="width: 100px;"><u>1-10.4</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td>For each batch record:</td><td> </td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Per Hand</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>10 gal</u></td></tr> </table>	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 employed	<u>Grout, pull, grout</u>	Casing retrieved (feet)	<u>13.4 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-10.4</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2</u>	Cement type	<u>Type 1 Per Hand</u>	Quantity of bentonite used (lbs.)	<u>10</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>10 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout, pull, grout</u>																																																
Casing retrieved (feet)	<u>13.4 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-10.4</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2</u>																																																
Cement type	<u>Type 1 Per Hand</u>																																																
Quantity of bentonite used (lbs.)	<u>10</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>10 gal</u>																																																
<p>COMMENTS: <u>Depth to water 10.8 ft. from TOC</u> <u>Knocked off end cap. Filled casing with grout.</u> <u>Pulled casing. Tremie grouted remaining</u> <u>borehole with grout. Topped off with soil.</u></p>																																																	

Geologic North Star
Drilling Contractor

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW13-1</i>																																																
Site Location: <i>SEAD13</i>	Driller: <i>Scott Breeds</i>																																																
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>																																																
Date: <i>9/15/10</i>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><i>Grout, pull, Grout</i></td></tr> <tr><td>Casing retrieved (feet)</td><td><i>14.9 ft</i></td></tr> <tr><td>Casing type/dia. (in.)</td><td><i>2" PVC</i></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><i>1-12.3 ft</i></td></tr> <tr><td># of batches prepared</td><td><i>1</i></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><i>18</i></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><i>2 bags</i></td></tr> <tr><td>Cement type</td><td><i>Type 1 Portland</i></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><i>10 pounds</i></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><i>13 gal</i></td></tr> </table>	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 employed	<i>Grout, pull, Grout</i>	Casing retrieved (feet)	<i>14.9 ft</i>	Casing type/dia. (in.)	<i>2" PVC</i>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<i>1-12.3 ft</i>	# of batches prepared	<i>1</i>	For each batch record:		Quantity of water used (gal.)	<i>18</i>	Quantity of cement used (lbs.)	<i>2 bags</i>	Cement type	<i>Type 1 Portland</i>	Quantity of bentonite used (lbs.)	<i>10 pounds</i>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<i>13 gal</i>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<i>Grout, pull, Grout</i>																																																
Casing retrieved (feet)	<i>14.9 ft</i>																																																
Casing type/dia. (in.)	<i>2" PVC</i>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<i>1-12.3 ft</i>																																																
# of batches prepared	<i>1</i>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<i>18</i>																																																
Quantity of cement used (lbs.)	<i>2 bags</i>																																																
Cement type	<i>Type 1 Portland</i>																																																
Quantity of bentonite used (lbs.)	<i>10 pounds</i>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<i>13 gal</i>																																																
<p>COMMENTS: <i>Depth to water = 7.5' ATW from TC</i> <i>Knocked out end plug. Loaded casing with grout.</i> <i>Pulled casing. Grouted remaining borehole.</i></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

 Drilling Contractor

 Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW13-2</i>																																																
Site Location: <i>SEAD 13</i>	Driller: <i>Scott Breads</i>																																																
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>																																																
Date: <i>9/15/10</i>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><i>Grout pull, Grout</i></td></tr> <tr><td>Casing retrieved (feet)</td><td><i>18.4</i></td></tr> <tr><td>Casing type/dia. (in.)</td><td><i>2" PVC</i></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBS)</td><td><i>1-16 ft</i></td></tr> <tr><td># of batches prepared</td><td><i>1</i></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><i>18</i></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><i>2 bags</i></td></tr> <tr><td>Cement type</td><td><i>Type 1</i></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><i>10</i></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><i>16 gal</i></td></tr> </table>	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 employed	<i>Grout pull, Grout</i>	Casing retrieved (feet)	<i>18.4</i>	Casing type/dia. (in.)	<i>2" PVC</i>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBS)	<i>1-16 ft</i>	# of batches prepared	<i>1</i>	For each batch record:		Quantity of water used (gal.)	<i>18</i>	Quantity of cement used (lbs.)	<i>2 bags</i>	Cement type	<i>Type 1</i>	Quantity of bentonite used (lbs.)	<i>10</i>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<i>16 gal</i>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<i>Grout pull, Grout</i>																																																
Casing retrieved (feet)	<i>18.4</i>																																																
Casing type/dia. (in.)	<i>2" PVC</i>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBS)	<i>1-16 ft</i>																																																
# of batches prepared	<i>1</i>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<i>18</i>																																																
Quantity of cement used (lbs.)	<i>2 bags</i>																																																
Cement type	<i>Type 1</i>																																																
Quantity of bentonite used (lbs.)	<i>10</i>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<i>16 gal</i>																																																
<p>COMMENTS: <i>Depth to water = DTW 5.25 from TOC</i> <i>Knocked out end cap. Loaded well with grout.</i> <i>Pulled casing. Grouted remaining borehole</i> <i>Add soil on top.</i></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

 Drilling Contractor

 Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW13-3</i>																																																
Site Location: <i>SEAD 13</i>	Driller: <i>Scott Breeds</i>																																																
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>																																																
Date: <i>9/15/10</i>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Interval Drilled</td><td style="width: 60%;"></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Method employed</td><td style="width: 60%;"><i>Grout Pull Grout</i></td></tr> <tr><td>Casing retrieved (feet)</td><td><i>23.5 ft.</i></td></tr> <tr><td>Casing type/dia. (in.)</td><td><i>2" PVC</i></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Equipment used</td><td style="width: 60%;"></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Interval grouted (FBLs)</td><td style="width: 60%;"><i>1-23.5</i></td></tr> <tr><td># of batches prepared</td><td><i>1</i></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><i>13</i></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><i>2 bags</i></td></tr> <tr><td>Cement type</td><td><i>Type 1 portland</i></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><i>10 pounds</i></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><i>24 gallons</i></td></tr> </table>	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 employed	<i>Grout Pull Grout</i>	Casing retrieved (feet)	<i>23.5 ft.</i>	Casing type/dia. (in.)	<i>2" PVC</i>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<i>1-23.5</i>	# of batches prepared	<i>1</i>	For each batch record:		Quantity of water used (gal.)	<i>13</i>	Quantity of cement used (lbs.)	<i>2 bags</i>	Cement type	<i>Type 1 portland</i>	Quantity of bentonite used (lbs.)	<i>10 pounds</i>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<i>24 gallons</i>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<i>Grout Pull Grout</i>																																																
Casing retrieved (feet)	<i>23.5 ft.</i>																																																
Casing type/dia. (in.)	<i>2" PVC</i>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<i>1-23.5</i>																																																
# of batches prepared	<i>1</i>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<i>13</i>																																																
Quantity of cement used (lbs.)	<i>2 bags</i>																																																
Cement type	<i>Type 1 portland</i>																																																
Quantity of bentonite used (lbs.)	<i>10 pounds</i>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<i>24 gallons</i>																																																
<p>COMMENTS: <i>Well heaved. Stickup broken. No water level. Knocked off end cap. Loaded casing with grout. Pulled casing. Grouted remaining borehole. Added soil at top.</i></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW13-4</u>
Site Location: <u>SEAD 13</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
Date: <u>9/16/10</u>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <u>Grout, Pull, Grout</u></p> <p>Casing retrieved (feet) <u>12.5 ft</u></p> <p>Casing type/dia. (in.) <u>2" PVC</u></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <u>1-9.9</u></p> <p># of batches prepared <u>1</u></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <u>18</u></p> <p>Quantity of cement used (lbs.) <u>2 bags</u></p> <p>Cement type <u>Type I Portland</u></p> <p>Quantity of bentonite used (lbs.) <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <u>9 gal</u></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>2.6' stick up removed</p> <p>12.5 TOP TO TD</p> <p>Soil</p> <p>PULLED PVC WELL</p> <p>Grout</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
<p>COMMENTS: <u>Depth to water = 6.0 ft from TOC</u></p> <p><u>Knocked out end cap. Loaded casing with grout.</u></p> <p><u>Pulled casing. Grouted remaining borehole.</u></p> <p><u>Added soil on top.</u></p>	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD

Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW13-5</u>
Site Location: <u>SEAD 13</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/16/10</u>

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 Grout, Pull, Grout

Casing retrieved (feet) 18.75 ft

Casing type/dia. (in.) 2" PVC

CASE PERFORATING

Equipment used

Number of perforations/foot

Size of perforations

Interval perforated

GROUTING

Interval grouted (FBLs) 1-16.15 ft

of batches prepared 1

For each batch record:

Quantity of water used (gal.) 18

Quantity of cement used (lbs.) 2 bags

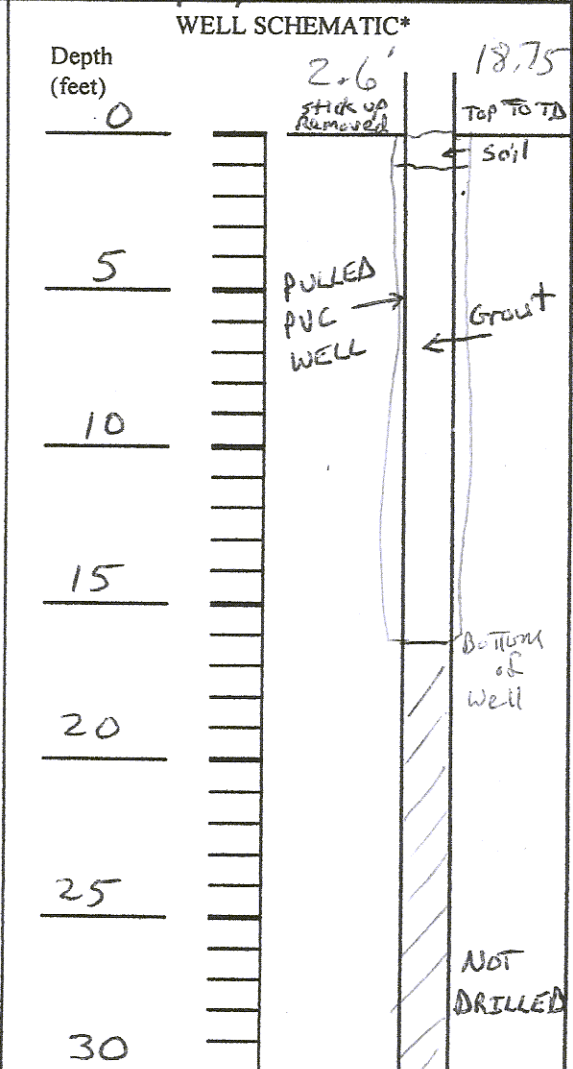
Cement type Type I Portland

Quantity of bentonite used (lbs.) 10 pounds

Quantity of calcium chloride used (lbs.)

Volume of grout prepared (gal.)

Volume of grout used (gal.) 17 gal.



COMMENTS: Depth to water = 8.52 ft from TOC
Knocked out end cap. Loaded casing with grout.
Pulled casing. Grouted remaining borehole.
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

Department Representative

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

WELL DECOMMISSIONING RECORD

Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW13-6</u>
Site Location: <u>SEAD 13</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/16/10</u>

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

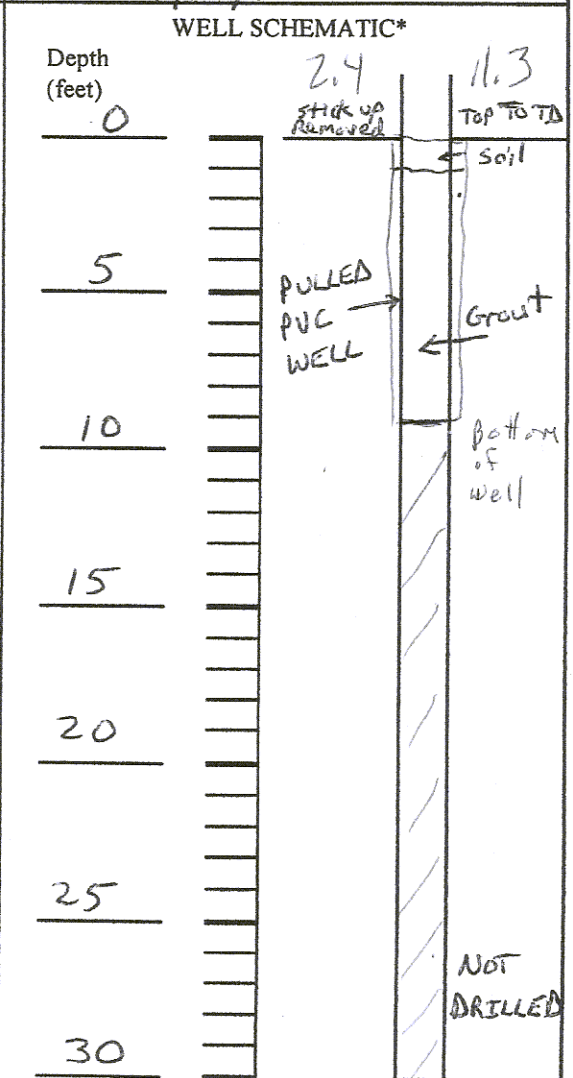
Method employed	<u>Grout, Pull, Grout</u>
Casing retrieved (feet)	<u>11.3 ft</u>
Casing type/dia. (in.)	<u>2" PVC</u>

CASE PERFORATING

Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	

GROUTING

Interval grouted (FBLs)	<u>1-9 ft</u>
# of batches prepared	<u>1</u>
<u>For each batch record:</u>	
Quantity of water used (gal.)	<u>18</u>
Quantity of cement used (lbs.)	<u>2 bags</u>
Cement type	<u>Type I Portland</u>
Quantity of bentonite used (lbs.)	<u>10 pounds</u>
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	<u>9 gal</u>



COMMENTS: Depth to water = 7.3 ft from TOC
Knocked out end cap. Loaded casing with grout.
Pulled casing. Grouted remaining borehole.
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

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW13-7</i>																																																
Site Location: <i>SEAD 13</i>	Driller: <i>Scott Breeds</i>																																																
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>																																																
Date: <i>9/15/10</i>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Interval Drilled</td><td style="width: 60%;"></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Method employed</td><td style="width: 60%;"><i>Grout pull, Grout</i></td></tr> <tr><td>Casing retrieved (feet)</td><td><i>10.6ft</i></td></tr> <tr><td>Casing type/dia. (in.)</td><td><i>2" PVC</i></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Equipment used</td><td style="width: 60%;"></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Interval grouted (FBLS)</td><td style="width: 60%;"></td></tr> <tr><td># of batches prepared</td><td></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><i>18</i></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><i>2 bags per batch</i></td></tr> <tr><td>Cement type</td><td><i>Type 1 per batch</i></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><i>10</i></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><i>8 gal</i></td></tr> </table>	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 employed	<i>Grout pull, Grout</i>	Casing retrieved (feet)	<i>10.6ft</i>	Casing type/dia. (in.)	<i>2" PVC</i>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLS)		# of batches prepared		For each batch record:		Quantity of water used (gal.)	<i>18</i>	Quantity of cement used (lbs.)	<i>2 bags per batch</i>	Cement type	<i>Type 1 per batch</i>	Quantity of bentonite used (lbs.)	<i>10</i>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<i>8 gal</i>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<i>Grout pull, Grout</i>																																																
Casing retrieved (feet)	<i>10.6ft</i>																																																
Casing type/dia. (in.)	<i>2" PVC</i>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLS)																																																	
# of batches prepared																																																	
For each batch record:																																																	
Quantity of water used (gal.)	<i>18</i>																																																
Quantity of cement used (lbs.)	<i>2 bags per batch</i>																																																
Cement type	<i>Type 1 per batch</i>																																																
Quantity of bentonite used (lbs.)	<i>10</i>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<i>8 gal</i>																																																
<p>COMMENTS: <i>Depth to water = 7.55 from TOC</i> <i>Knocked off end cap. Loaded casing with grout.</i> <i>Pulled casing. Grouted remaining borehole.</i> <i>Added soil on top</i></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name:	Well ID: <u>MW13-9</u>																																																
Site Location:	Driller:																																																
Drilling Company:	Inspector:																																																
Date:																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>16.2 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>PVC 2"</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Interval grouted (FBLs)</td><td><u>1-14.8 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>15 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>16.2 ft</u>	Casing type/dia. (in.)	<u>PVC 2"</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-14.8 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1</u>	Quantity of bentonite used (lbs.)	<u>10</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>15 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>16.2 ft</u>																																																
Casing type/dia. (in.)	<u>PVC 2"</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-14.8 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1</u>																																																
Quantity of bentonite used (lbs.)	<u>10</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>15 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 6 ft. from TOC</u> <u>Knocked off end plug. Grouted casing with</u> <u>grout. Pulled casing. Grouted rest of</u> <u>borehole. Add soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW13-10</i>
Site Location: <i>SEAD 13</i>	Driller: <i>Scott Braeds</i>
Drilling Company: <i>Geologic North Star</i>	Inspector:
Date:	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="text"/></p> <p>Casing retrieved (feet) <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="text"/></p> <p># of batches prepared <input type="text"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text"/></p> <p>Quantity of cement used (lbs.) <input type="text"/></p> <p>Cement type <input type="text"/></p> <p>Quantity of bentonite used (lbs.) <input type="text"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text"/></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0 <input type="text"/></p> <p>5 <input type="text"/></p> <p>10 <input type="text"/></p> <p>15 <input type="text"/></p> <p><i>1.8' stickup</i></p> <p><i>16.2 TOC TO TB</i></p> <p><i>soil</i></p> <p><i>Grout</i></p> <p><i>pulled PVC well</i></p> <p><i>Bottom of well</i></p> <p><i>Not Drilled</i></p>
<p>COMMENTS: <i>Depth to water = 6.6 FT from TOC</i></p> <p><i>Knocked end cap off. Well casing came with rods.</i></p> <p><i>Tremie grouted hole. Added soil on top</i></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Notes

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <i>Seneca Army Depot</i>	Well ID: <i>MW 13-11</i>																																																
Site Location: <i>SEAD 13</i>	Driller: <i>Scott Breed 5</i>																																																
Drilling Company: <i>Geologic North Star</i>	Inspector: <i>Scott Dillman</i>																																																
Date: <i>9/15/10</i>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><i>Grout Pull Grout</i></td></tr> <tr><td>Casing retrieved (feet)</td><td><i>16.6 ft</i></td></tr> <tr><td>Casing type/dia. (in.)</td><td><i>2" PVC</i></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBS)</td><td><i>1-14.8</i></td></tr> <tr><td># of batches prepared</td><td><i>1</i></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><i>18</i></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><i>2 bags</i></td></tr> <tr><td>Cement type</td><td><i>Type I</i></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><i>10 pounds</i></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><i>15 gal.</i></td></tr> </table>	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 employed	<i>Grout Pull Grout</i>	Casing retrieved (feet)	<i>16.6 ft</i>	Casing type/dia. (in.)	<i>2" PVC</i>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBS)	<i>1-14.8</i>	# of batches prepared	<i>1</i>	<u>For each batch record:</u>		Quantity of water used (gal.)	<i>18</i>	Quantity of cement used (lbs.)	<i>2 bags</i>	Cement type	<i>Type I</i>	Quantity of bentonite used (lbs.)	<i>10 pounds</i>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<i>15 gal.</i>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<i>Grout Pull Grout</i>																																																
Casing retrieved (feet)	<i>16.6 ft</i>																																																
Casing type/dia. (in.)	<i>2" PVC</i>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBS)	<i>1-14.8</i>																																																
# of batches prepared	<i>1</i>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<i>18</i>																																																
Quantity of cement used (lbs.)	<i>2 bags</i>																																																
Cement type	<i>Type I</i>																																																
Quantity of bentonite used (lbs.)	<i>10 pounds</i>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<i>15 gal.</i>																																																
<p>COMMENTS: <i>Depth to water = 5.1 ft from TOC</i> <i>Knocked out end cap. Loaded casing with grout. Pulled casing. Grouted remaining borehole. Added soil on top.</i></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Geologic North Star

 Drilling Contractor

 Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 13-12</u>																																																
Site Location: <u>SEAD 13</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/16/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>10.9 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-9.9 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td>For each batch record:</td><td></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>9 gal.</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>10.9 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-9.9 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>9 gal.</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>10.9 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-9.9 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>9 gal.</u>																																																
<p>COMMENTS: <u>Depth to water = 6.05 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 24-1</u>
Site Location: <u>SEAD-24</u>	Driller: <u>Joe Menzel</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
Date: <u>9/22/10</u>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p>CASING PULLING</p> <p>Method employed <input type="text" value="Grout, Pull, Grout"/></p> <p>Casing retrieved (feet) <input type="text" value="12.1 ft"/></p> <p>Casing type/dia. (in.) <input pvc"="" type="text" value="2"/></p> <p>CASE PERFORATING</p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p>GROUTING</p> <p>Interval grouted (FBLs) <input type="text" value="1-9.6 ft"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="18"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="2 bags"/></p> <p>Cement type <input type="text" value="Type I Portland"/></p> <p>Quantity of bentonite used (lbs.) <input type="text" value="10 pounds"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text" value="9 gal"/></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>2.5</p> <p>12.1</p> <p>Stick up Removed</p> <p>Top TO TD</p> <p>Soil</p> <p>Grout</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
<p>COMMENTS: <u>Depth to water = 6.52 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 24-2</u>																																																
Site Location: <u>SEAD 24</u>	Driller: <u>Joe Menzel</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/22/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p>CASING PULLING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>18.4 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p>CASE PERFORATING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p>GROUTING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-16.2</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>16 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>18.4 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-16.2</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>16 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>2 ft stick up removed</p> <p>18.4 Top TO TD</p> <p>Soil concrete</p> <p>PULLED PVC WELL</p> <p>Grout</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>18.4 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-16.2</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>16 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 8.25 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 24-3</u>																																																
Site Location: <u>SEAD 24</u>	Driller: <u>Scott Breeds Joe Menzel</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/22/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p>CASING PULLING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>17.3 ft.</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p>CASE PERFORATING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p>GROUTING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-19.9</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>15 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>15 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>17.3 ft.</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-19.9</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>15 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>15 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: 2.4 ft stick up removed, PULLED PVC WELL, Grout, Soil & Concrete, Bottom of well, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>17.3 ft.</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-19.9</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>15 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>15 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.22 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

MW25-4D

WELL DECOMMISSIONING RECORD	
Site Name: SEAD-25	Well ID: MW25-4D
Site Location: Fire Training area	Driller:
Drilling Company:	Inspector: McAfee
Date:	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="text"/></p> <p>Casing retrieved (feet) <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLS) <input type="text" value="23.1"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="18gal"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="88lbs"/></p> <p>Cement type <input type="text" value="portland #1"/></p> <p>Quantity of bentonite used (lbs.) <input type="text" value="10lbs"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text" value="29 gallons"/></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>5</p><hr/><p>10</p><hr/><p>15</p><hr/><p>20</p><hr/><p>25</p><hr/> </div> <div style="flex-grow: 1;"> </div> </div>
<p>COMMENTS:</p> <p><i>pull dollards, perforate end cap, TEMPER grout</i></p> <p><i>pull perforate casing, top off grout backfill</i></p>	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

Grout in place.

TD: 25.3
Grd: 23.1

MW25-4D

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

WELL DECOMMISSIONING RECORD																																																																	
Site Name: SEAD-25	Well ID: MW25-7D																																																																
Site Location: Fire training area	Driller:																																																																
Drilling Company:	Inspector: McAlister																																																																
Date:																																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Interval Drilled</td><td style="width: 60%;"><input type="text"/></td></tr> <tr><td>Drilling Method(s)</td><td><input type="text"/></td></tr> <tr><td>Borehole Dia. (in.)</td><td><input type="text"/></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td><input type="text"/></td></tr> <tr><td>Depth temporary casing installed</td><td><input type="text"/></td></tr> <tr><td>Casing type/dia. (in.)</td><td><input type="text"/></td></tr> <tr><td>Method of installing</td><td><input type="text"/></td></tr> </table> <p><u>CASING PULLING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Method employed</td><td style="width: 60%;"><input type="text"/></td></tr> <tr><td>Casing retrieved (feet)</td><td><input type="text"/></td></tr> <tr><td>Casing type/dia. (in.)</td><td><input type="text"/></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Equipment used</td><td style="width: 60%;"><input type="text"/></td></tr> <tr><td>Number of perforations/foot</td><td><input type="text"/></td></tr> <tr><td>Size of perforations</td><td><input type="text"/></td></tr> <tr><td>Interval perforated</td><td><input type="text"/></td></tr> </table> <p><u>GROUTING</u></p> <table style="width:100%; border-collapse: collapse;"> <tr><td style="width: 40%;">Interval grouted (FBS)</td><td style="width: 60%;"><input type="text"/></td></tr> <tr><td># of batches prepared</td><td align="center">1</td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td>180 gals</td></tr> <tr><td>Quantity of cement used (lbs.)</td><td>180 lbs</td></tr> <tr><td>Cement type</td><td>Portland #1</td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td>10 lbs</td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td><input type="text"/></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td><input type="text"/></td></tr> <tr><td>Volume of grout used (gal.)</td><td>30 gal (w)</td></tr> </table>	Interval Drilled	<input type="text"/>	Drilling Method(s)	<input type="text"/>	Borehole Dia. (in.)	<input type="text"/>	Temporary Casing Installed? (y/n)	<input type="text"/>	Depth temporary casing installed	<input type="text"/>	Casing type/dia. (in.)	<input type="text"/>	Method of installing	<input type="text"/>	Method employed	<input type="text"/>	Casing retrieved (feet)	<input type="text"/>	Casing type/dia. (in.)	<input type="text"/>	Equipment used	<input type="text"/>	Number of perforations/foot	<input type="text"/>	Size of perforations	<input type="text"/>	Interval perforated	<input type="text"/>	Interval grouted (FBS)	<input type="text"/>	# of batches prepared	1	For each batch record:		Quantity of water used (gal.)	180 gals	Quantity of cement used (lbs.)	180 lbs	Cement type	Portland #1	Quantity of bentonite used (lbs.)	10 lbs	Quantity of calcium chloride used (lbs.)	<input type="text"/>	Volume of grout prepared (gal.)	<input type="text"/>	Volume of grout used (gal.)	30 gal (w)	<p align="center">WELL SCHEMATIC*</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Depth (feet)</td> <td style="width: 15%;"></td> <td style="width: 70%;"></td> </tr> <tr> <td></td> <td style="text-align: center;">5</td> <td rowspan="6" style="text-align: center; vertical-align: middle;"> </td> </tr> <tr><td></td><td style="text-align: center;">10</td></tr> <tr><td></td><td style="text-align: center;">15</td></tr> <tr><td></td><td style="text-align: center;">20</td></tr> <tr><td></td><td style="text-align: center;">25</td></tr> <tr><td></td><td style="text-align: center;">30</td></tr> </table>	Depth (feet)				5			10		15		20		25		30
Interval Drilled	<input type="text"/>																																																																
Drilling Method(s)	<input type="text"/>																																																																
Borehole Dia. (in.)	<input type="text"/>																																																																
Temporary Casing Installed? (y/n)	<input type="text"/>																																																																
Depth temporary casing installed	<input type="text"/>																																																																
Casing type/dia. (in.)	<input type="text"/>																																																																
Method of installing	<input type="text"/>																																																																
Method employed	<input type="text"/>																																																																
Casing retrieved (feet)	<input type="text"/>																																																																
Casing type/dia. (in.)	<input type="text"/>																																																																
Equipment used	<input type="text"/>																																																																
Number of perforations/foot	<input type="text"/>																																																																
Size of perforations	<input type="text"/>																																																																
Interval perforated	<input type="text"/>																																																																
Interval grouted (FBS)	<input type="text"/>																																																																
# of batches prepared	1																																																																
For each batch record:																																																																	
Quantity of water used (gal.)	180 gals																																																																
Quantity of cement used (lbs.)	180 lbs																																																																
Cement type	Portland #1																																																																
Quantity of bentonite used (lbs.)	10 lbs																																																																
Quantity of calcium chloride used (lbs.)	<input type="text"/>																																																																
Volume of grout prepared (gal.)	<input type="text"/>																																																																
Volume of grout used (gal.)	30 gal (w)																																																																
Depth (feet)																																																																	
	5																																																																
	10																																																																
	15																																																																
	20																																																																
	25																																																																
	30																																																																
<p>COMMENTS:</p> <p>Remove Baloids, Tremmie Grout, Remove Protective casing, Top off Grout, Cut Steel-5 Casing, Backfill</p>		<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																															

Drilling Contractor

Department Representative

Grout in place

30.2

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

MW 25-11

WELL DECOMMISSIONING RECORD																																																	
Site Name: SEAD 25	Well ID: MW-11																																																
Site Location: Fire training Area	Driller:																																																
Drilling Company: Geologic NS	Inspector: MCA/11/10																																																
	Date:																																																
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td>Pull</td></tr> <tr><td>Casing retrieved (feet)</td><td>7.3 ft</td></tr> <tr><td>Casing type/dia. (in.)</td><td>2" PVC</td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBS)</td><td>5.5 ft</td></tr> <tr><td># of batches prepared</td><td>1</td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td>18 gal</td></tr> <tr><td>Quantity of cement used (lbs.)</td><td>180</td></tr> <tr><td>Cement type</td><td>Portland #1</td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td>10 lbs</td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td>10 gal</td></tr> </table>	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 employed	Pull	Casing retrieved (feet)	7.3 ft	Casing type/dia. (in.)	2" PVC	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBS)	5.5 ft	# of batches prepared	1	For each batch record:		Quantity of water used (gal.)	18 gal	Quantity of cement used (lbs.)	180	Cement type	Portland #1	Quantity of bentonite used (lbs.)	10 lbs	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	10 gal	<p align="center">WELL SCHEMATIC*</p>
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 employed	Pull																																																
Casing retrieved (feet)	7.3 ft																																																
Casing type/dia. (in.)	2" PVC																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBS)	5.5 ft																																																
# of batches prepared	1																																																
For each batch record:																																																	
Quantity of water used (gal.)	18 gal																																																
Quantity of cement used (lbs.)	180																																																
Cement type	Portland #1																																																
Quantity of bentonite used (lbs.)	10 lbs																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	10 gal																																																
<p>COMMENTS:</p> <p>Remove Ballasts, Remove end cap with perforation</p> <p>Remove Grout Remove protective casing pipe</p> <p>Top off Grout Backfill</p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																

Drilling Contractor

Department Representative

Casing pulled

TD: **7.3**
Grout = **5.5**

next to 12 D

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

MW25-12D

WELL DECOMMISSIONING RECORD																																																																									
Site Name: <u>SEAD-25</u>	Well ID: <u>MW-12D</u>																																																																								
Site Location: <u>Fire Training Area</u>	Driller:																																																																								
Drilling Company: <u>Gedopt</u>	Inspector: <u>McHugh</u>																																																																								
Date:																																																																									
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td></td></tr> <tr><td>Casing retrieved (feet)</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td align="center"><u>23.3</u></td></tr> <tr><td># of batches prepared</td><td align="center"><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td align="center"><u>18gal</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td align="center"><u>185lbs</u></td></tr> <tr><td>Cement type</td><td align="center"><u>Portland #1</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td align="center"><u>10lbs</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td align="center"><u>20 gallons</u></td></tr> </table>	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 employed		Casing retrieved (feet)		Casing type/dia. (in.)		Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>23.3</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18gal</u>	Quantity of cement used (lbs.)	<u>185lbs</u>	Cement type	<u>Portland #1</u>	Quantity of bentonite used (lbs.)	<u>10lbs</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>20 gallons</u>	<p align="center">WELL SCHEMATIC*</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Depth (feet)</td> <td style="width: 15%;"></td> <td style="width: 70%;"></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td rowspan="10" style="text-align: center; vertical-align: middle;"> </td> </tr> <tr><td align="center">5</td><td style="text-align: center;"> </td></tr> <tr><td align="center">10</td><td style="text-align: center;"> </td></tr> <tr><td align="center">15</td><td style="text-align: center;"> </td></tr> <tr><td align="center">20</td><td style="text-align: center;"> </td></tr> <tr><td align="center">25</td><td style="text-align: center;"> </td></tr> <tr><td></td><td style="text-align: center;"> </td></tr> <tr><td></td><td style="text-align: center;"> </td></tr> <tr><td></td><td style="text-align: center;"> </td></tr> <tr><td></td><td style="text-align: center;"> </td></tr> </table>	Depth (feet)						5		10		15		20		25									
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 employed																																																																									
Casing retrieved (feet)																																																																									
Casing type/dia. (in.)																																																																									
Equipment used																																																																									
Number of perforations/foot																																																																									
Size of perforations																																																																									
Interval perforated																																																																									
Interval grouted (FBLs)	<u>23.3</u>																																																																								
# of batches prepared	<u>1</u>																																																																								
For each batch record:																																																																									
Quantity of water used (gal.)	<u>18gal</u>																																																																								
Quantity of cement used (lbs.)	<u>185lbs</u>																																																																								
Cement type	<u>Portland #1</u>																																																																								
Quantity of bentonite used (lbs.)	<u>10lbs</u>																																																																								
Quantity of calcium chloride used (lbs.)																																																																									
Volume of grout prepared (gal.)																																																																									
Volume of grout used (gal.)	<u>20 gallons</u>																																																																								
Depth (feet)																																																																									
5																																																																									
10																																																																									
15																																																																									
20																																																																									
25																																																																									
<p>COMMENTS:</p> <p><u>Remove Ballards, perforate and cap, Remove grout. Remove protective case & concrete pad. (cp off grout), Backfill</u></p>																																																																									

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

Groot in place

TD: 25.1
Groot 23.3
MW25-12D

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

MW 25-14D

WELL DECOMMISSIONING RECORD																																																	
Site Name: SEAD 25	Well ID: MW 25-14D																																																
Site Location: Fire training area	Driller:																																																
Drilling Company: Geologic NS	Inspector: McAloach																																																
Date:																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td></td></tr> <tr><td>Casing retrieved (feet)</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td align="center">22.8'</td></tr> <tr><td># of batches prepared</td><td align="center">1</td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td align="center">18 gal</td></tr> <tr><td>Quantity of cement used (lbs.)</td><td align="center">180 lbs</td></tr> <tr><td>Cement type</td><td align="center">Portland #1</td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td align="center">Bentonite 10 lbs</td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td align="center">2.5 gal</td></tr> </table>	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 employed		Casing retrieved (feet)		Casing type/dia. (in.)		Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	22.8'	# of batches prepared	1	For each batch record:		Quantity of water used (gal.)	18 gal	Quantity of cement used (lbs.)	180 lbs	Cement type	Portland #1	Quantity of bentonite used (lbs.)	Bentonite 10 lbs	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	2.5 gal	<p align="center">WELL SCHEMATIC*</p>
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 employed																																																	
Casing retrieved (feet)																																																	
Casing type/dia. (in.)																																																	
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	22.8'																																																
# of batches prepared	1																																																
For each batch record:																																																	
Quantity of water used (gal.)	18 gal																																																
Quantity of cement used (lbs.)	180 lbs																																																
Cement type	Portland #1																																																
Quantity of bentonite used (lbs.)	Bentonite 10 lbs																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	2.5 gal																																																
<p>COMMENTS:</p> <p>Remove Ballards, Tremmie Grout, Remove protective casing, Top off grout, Backfill cut casing to -5ft Bgs</p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

Grout in place

TD: 24.8
Grout: 22.8

MW 25-14D

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

WELL DECOMMISSIONING RECORD																																																																														
Site Name: SEAD-25	Well ID: MW 25-16D																																																																													
Site Location: Fire Training area	Driller:																																																																													
Drilling Company: George NS	Inspector:																																																																													
Date:																																																																														
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td></td></tr> <tr><td>Casing retrieved (feet)</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLS)</td><td></td></tr> <tr><td># of batches prepared</td><td align="center">1</td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td align="center">18 gallons</td></tr> <tr><td>Quantity of cement used (lbs.)</td><td align="center">180 lbs</td></tr> <tr><td>Cement type</td><td align="center">Portland #1</td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td align="center">10 lbs</td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td align="center">25 gallons</td></tr> </table>	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 employed		Casing retrieved (feet)		Casing type/dia. (in.)		Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLS)		# of batches prepared	1	For each batch record:		Quantity of water used (gal.)	18 gallons	Quantity of cement used (lbs.)	180 lbs	Cement type	Portland #1	Quantity of bentonite used (lbs.)	10 lbs	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	25 gallons	<p align="center">WELL SCHEMATIC*</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">Depth (feet)</th> <th style="width: 15%;"></th> <th style="width: 70%;"></th> </tr> <tr> <td></td> <td></td> <td align="right">-50'</td> </tr> <tr> <td align="center">5</td> <td></td> <td rowspan="10" style="text-align: center; vertical-align: middle;"> </td> </tr> <tr><td align="center">10</td><td></td></tr> <tr><td align="center">15</td><td></td></tr> <tr><td align="center">20</td><td></td></tr> <tr><td align="center">25</td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table>	Depth (feet)					-50'	5			10		15		20		25													
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 employed																																																																														
Casing retrieved (feet)																																																																														
Casing type/dia. (in.)																																																																														
Equipment used																																																																														
Number of perforations/foot																																																																														
Size of perforations																																																																														
Interval perforated																																																																														
Interval grouted (FBLS)																																																																														
# of batches prepared	1																																																																													
For each batch record:																																																																														
Quantity of water used (gal.)	18 gallons																																																																													
Quantity of cement used (lbs.)	180 lbs																																																																													
Cement type	Portland #1																																																																													
Quantity of bentonite used (lbs.)	10 lbs																																																																													
Quantity of calcium chloride used (lbs.)																																																																														
Volume of grout prepared (gal.)																																																																														
Volume of grout used (gal.)	25 gallons																																																																													
Depth (feet)																																																																														
		-50'																																																																												
5																																																																														
10																																																																														
15																																																																														
20																																																																														
25																																																																														
<p>COMMENTS:</p> <p><i>Remove Ballards, Perforate end cap, Remove GROUT, Remove protective casing. Top off grout, Cut casing below grade TOPPORT Backfill</i></p>																																																																														

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

25-
MW 25-16D

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 26-1</u>																																																
Site Location: <u>SEAD 26</u>	Driller: <u>Steve Laramie</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/23/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>GROUT, PULL, GROUT</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>8.5 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-6.5</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>4 gal</u></td></tr> </table>	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 employed	<u>GROUT, PULL, GROUT</u>	Casing retrieved (feet)	<u>8.5 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-6.5</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>4 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Well Diameter: <u>2" #</u></p> <p>Stick up Removed at 0 ft</p> <p>PULLED PVC WELL at 8.5 ft</p> <p>GROUT below 8.5 ft</p> <p>TOP TO TD at 8.5 ft</p> <p>Soil above 8.5 ft</p> <p>NOT DRILLED below 30 ft</p>
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 employed	<u>GROUT, PULL, GROUT</u>																																																
Casing retrieved (feet)	<u>8.5 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-6.5</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>4 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 6.0 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
 Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 26-2</u>																																																
Site Location: <u>SEAD 26</u>	Driller: <u>Joe Menzel</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/23/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>16.5 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-14.1 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>15 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>16.5 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-14.1 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>15 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: 2.4 ft stick up removed, 16.5 ft TOP TO TD, Soil & Grout, PULLED PVC WELL, Grout, Bottom of Well, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>16.5 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-14.1 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>15 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 15.63 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 26-3</u>																																																
Site Location: <u>SEAD 26</u>	Driller: <u>Joe Menzel</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/23/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pul, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>16.4 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBS)</td><td><u>1-14</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>14 gal</u></td></tr> </table>	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 employed	<u>Grout, Pul, Grout</u>	Casing retrieved (feet)	<u>16.4 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBS)	<u>1-14</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>14 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: 2.5ft stick up removed, 16.4 TOP TO TD, Soil, PULLED PVC WELL, Grout, Bottom of well, NOT DRILLED</p>
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 employed	<u>Grout, Pul, Grout</u>																																																
Casing retrieved (feet)	<u>16.4 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBS)	<u>1-14</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>14 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 12.90 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 26-4</u>																																																
Site Location: <u>SEAD 26</u>	Driller: <u>Steve Casamee</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/23/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>13 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-11 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>11 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>13 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-11 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>11 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>stick up removed</p> <p>2 ft</p> <p>13 ft</p> <p>Top TO TD</p> <p>Soil</p> <p>PULLED PVC WELL</p> <p>Grout</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>13 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-11 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>11 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 9.5 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 26-5</u>
Site Location: <u>SEAD</u>	Driller: <u>Joe Menzel</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
Date: <u>9/23/10</u>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p>CASING PULLING</p> <p>Method employed <input type="checkbox"/> <u>Grout, Pull, Grout</u></p> <p>Casing retrieved (feet) <input type="checkbox"/> <u>17.1 ft</u></p> <p>Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u></p> <p>CASE PERFORATING</p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p>GROUTING</p> <p>Interval grouted (FBS) <input type="checkbox"/> <u>1-15.4 ft</u></p> <p># of batches prepared <input type="checkbox"/> <u>1</u></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/> <u>18</u></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u></p> <p>Cement type <input type="checkbox"/> <u>Type I Portland</u></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/> <u>16 gallons</u></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>stick up removed</p> <p>17.1 ft</p> <p>17.1 ft TOP TO TD</p> <p>Soil</p> <p>PULLED PVC WELL</p> <p>Grout</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
<p>COMMENTS: <u>Depth to water = 14.47 ft from TOC</u></p> <p><u>Knocked out end cap. Loaded casing with grout.</u></p> <p><u>Pulled casing. Grouted remaining borehole.</u></p> <p><u>Added soil on top.</u></p>	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 26-6</u>																																																
Site Location: <u>SEAD 26</u>	Driller: <u>Joe Menzel</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/23/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td style="width: 100px;"> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>17.0 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBS)</td><td><u>1-17</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>16 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>17.0 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBS)	<u>1-17</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>16 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>17.0 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBS)	<u>1-17</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>16 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 13.37 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 26-7</u>	
Site Location: <u>SEAD 26</u>	Driller: <u>Steve Loranee</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>	
	Date: <u>9/23/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled <input type="checkbox"/> Drilling Method(s) <input type="checkbox"/> Borehole Dia. (in.) <input type="checkbox"/> Temporary Casing Installed? (y/n) <input type="checkbox"/> Depth temporary casing installed <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/> Method of installing <input type="checkbox"/>		
<u>CASING PULLING</u> Method employed <input type="checkbox"/> <u>Grout, Pull, Grout</u> Casing retrieved (feet) <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u>		
<u>CASE PERFORATING</u> Equipment used <input type="checkbox"/> Number of perforations/foot <input type="checkbox"/> Size of perforations <input type="checkbox"/> Interval perforated <input type="checkbox"/>		
<u>GROUTING</u> Interval grouted (FBLs) <input type="checkbox"/> <u>1-18 ft</u> # of batches prepared <input type="checkbox"/> <u>1</u> For each batch record: Quantity of water used (gal.) <input type="checkbox"/> <u>18</u> Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u> Cement type <input type="checkbox"/> <u>Type I Portland</u> Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 pounds</u> Quantity of calcium chloride used (lbs.) <input type="checkbox"/> Volume of grout prepared (gal.) <input type="checkbox"/> Volume of grout used (gal.) <input type="checkbox"/> <u>17 gal</u>		
COMMENTS: <u>Depth to water = ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u>		
* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.		

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW26-8</u>
Site Location: <u>SEAD 24</u>	Driller: <u>Steve Lawrence</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
Date: <u>9/23/10</u>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p>CASING PULLING</p> <p>Method employed <input type="checkbox"/> <u>Grout, Pull, Grout</u></p> <p>Casing retrieved (feet) <input type="checkbox"/> <u>13.5 ft</u></p> <p>Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u></p> <p>CASE PERFORATING</p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p>GROUTING</p> <p>Interval grouted (FBLs) <input type="checkbox"/> <u>1-13.5 ft</u></p> <p># of batches prepared <input type="checkbox"/> <u>1</u></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/> <u>18</u></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u></p> <p>Cement type <input type="checkbox"/> <u>Type I Portland</u></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/> <u>12 gal</u></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p>
<p>COMMENTS: <u>Depth to water = 11.0 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 26-10</u>																																																
Site Location: <u>SEAD 26</u>	Driller: <u>Steve Loran</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/23/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>13.5 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-12 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>12 gal.</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>13.5 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-12 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>12 gal.</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>1.5 ft Stick up Removed</p> <p>13.5</p> <p>Top TO TD</p> <p>Soil</p> <p>PULLED PVC WELL</p> <p>Grout</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>13.5 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-12 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>12 gal.</u>																																																
<p>COMMENTS: <u>Depth to water = 9.0 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 26-11</u>																																																
Site Location: <u>SEAD 26</u>	Driller: <u>Joe Merzel</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/23/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pul, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>16.4 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-15.1</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>15 gal</u></td></tr> </table>	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 employed	<u>Grout, Pul, Grout</u>	Casing retrieved (feet)	<u>16.4 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-15.1</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>15 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>1.34 stick up removed</p> <p>16.4 ft Top TO TD</p> <p>Soil & Concrete</p> <p>PULLED PVC WELL</p> <p>Grout</p> <p>Bottom of Well</p> <p>NOT DRILLED</p>
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 employed	<u>Grout, Pul, Grout</u>																																																
Casing retrieved (feet)	<u>16.4 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-15.1</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>15 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 15.43 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD

Site Name: Seneca Army Depot
 Site Location: SEAD 27
 Drilling Company: Geologic North Star

Well ID: MW 27-1
 Driller: Joe Menzel
 Inspector: Scott Dillman
 Date: 9/23/10

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 Grout, Pull, Grout
 Casing retrieved (feet) 17.2 ft
 Casing type/dia. (in.) 2" PVC

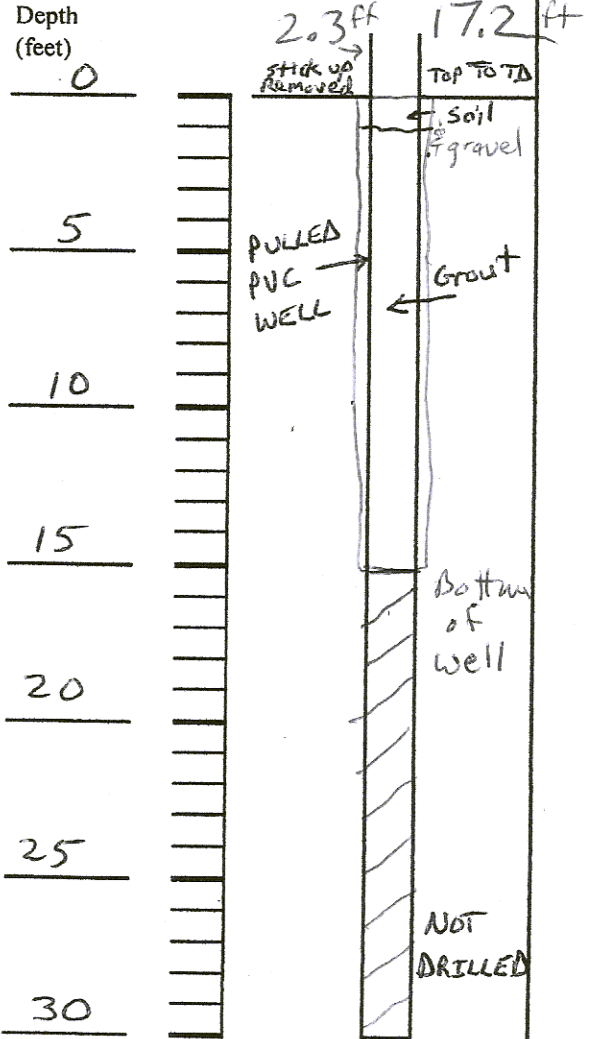
CASE PERFORATING

Equipment used _____
 Number of perforations/foot _____
 Size of perforations _____
 Interval perforated _____

GROUTING

Interval grouted (FBLs) 1-14.9 ft
 # of batches prepared 1
 For each batch record:
 Quantity of water used (gal.) 18
 Quantity of cement used (lbs.) 2 bags
 Cement type Type I Portland
 Quantity of bentonite used (lbs.) 10 pounds
 Quantity of calcium chloride used (lbs.) _____
 Volume of grout prepared (gal.) _____
 Volume of grout used (gal.) 18 gal

WELL SCHEMATIC*



COMMENTS: Depth to water = 6.33 ft from TOC
Knocked out end cap. Loaded casing with grout.
Pulled casing. Grouted remaining borehole.
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

Department Representative

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 27-2</u>	
Site Location: <u>SEAD 27</u>	Driller: <u>Joe Menzel</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>	
	Date: <u>9/23/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled _____ Drilling Method(s) _____ Borehole Dia. (in.) _____ Temporary Casing Installed? (y/n) _____ Depth temporary casing installed _____ Casing type/dia. (in.) _____ Method of installing _____		
<u>CASING PULLING</u> Method employed <u>Grout, Pull, Grout</u> Casing retrieved (feet) <u>17.4 ft</u> Casing type/dia. (in.) <u>2" PVC</u>		
<u>CASE PERFORATING</u> Equipment used _____ Number of perforations/foot _____ Size of perforations _____ Interval perforated _____		
<u>GROUTING</u> Interval grouted (FBLs) <u>1-14.8 ft</u> # of batches prepared <u>1</u> For each batch record: Quantity of water used (gal.) <u>18</u> Quantity of cement used (lbs.) <u>2 bags</u> Cement type <u>Type I Portland</u> Quantity of bentonite used (lbs.) <u>10 pounds</u> Quantity of calcium chloride used (lbs.) _____ Volume of grout prepared (gal.) _____ Volume of grout used (gal.) <u>18 gal</u>		
COMMENTS: <u>Depth to water = 6.25 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u>		
* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.		

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW48-1</u>																																																
Site Location: <u>SEAD 48</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/21/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout Pull Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>9.9 TL</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLS)</td><td><u>1-7.5 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>7 gal</u></td></tr> </table>	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 employed	<u>Grout Pull Grout</u>	Casing retrieved (feet)	<u>9.9 TL</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLS)	<u>1-7.5 ft</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>7 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout Pull Grout</u>																																																
Casing retrieved (feet)	<u>9.9 TL</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLS)	<u>1-7.5 ft</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>7 gal</u>																																																
<p><u>COMMENTS:</u> <u>Depth to water = 7.28 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD									
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW48-2</u>								
Site Location: <u>SEAD</u>	Driller: <u>Steve Laramee</u>								
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Ben McAllister</u>								
	Date: <u>9/23/10</u>								
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*								
<u>OVERDRILLING</u> Interval Drilled <table border="1" style="width: 100%;"><tr><td> </td></tr></table> Drilling Method(s) <table border="1" style="width: 100%;"><tr><td> </td></tr></table> Borehole Dia. (in.) <table border="1" style="width: 100%;"><tr><td> </td></tr></table> Temporary Casing Installed? (y/n) <table border="1" style="width: 100%;"><tr><td> </td></tr></table> Depth temporary casing installed <table border="1" style="width: 100%;"><tr><td> </td></tr></table> Casing type/dia. (in.) <table border="1" style="width: 100%;"><tr><td> </td></tr></table> Method of installing <table border="1" style="width: 100%;"><tr><td> </td></tr></table>									
<u>CASING PULLING</u> Method employed <table border="1" style="width: 100%;"><tr><td><u>GROUT, PUL, GROUT</u></td></tr></table> Casing retrieved (feet) <table border="1" style="width: 100%;"><tr><td><u>10 FT</u></td></tr></table> Casing type/dia. (in.) <table border="1" style="width: 100%;"><tr><td><u>2" PVC</u></td></tr></table>	<u>GROUT, PUL, GROUT</u>	<u>10 FT</u>	<u>2" PVC</u>						
<u>GROUT, PUL, GROUT</u>									
<u>10 FT</u>									
<u>2" PVC</u>									
<u>CASE PERFORATING</u> Equipment used <table border="1" style="width: 100%;"><tr><td> </td></tr></table> Number of perforations/foot <table border="1" style="width: 100%;"><tr><td> </td></tr></table> Size of perforations <table border="1" style="width: 100%;"><tr><td> </td></tr></table> Interval perforated <table border="1" style="width: 100%;"><tr><td> </td></tr></table>									
<u>GROUTING</u> Interval grouted (FBLs) <table border="1" style="width: 100%;"><tr><td><u>1-8 FT</u></td></tr></table> # of batches prepared <table border="1" style="width: 100%;"><tr><td><u>1</u></td></tr></table> For each batch record: Quantity of water used (gal.) <table border="1" style="width: 100%;"><tr><td><u>18</u></td></tr></table> Quantity of cement used (lbs.) <table border="1" style="width: 100%;"><tr><td><u>2 bags</u></td></tr></table> Cement type <table border="1" style="width: 100%;"><tr><td><u>Type I Portland</u></td></tr></table> Quantity of bentonite used (lbs.) <table border="1" style="width: 100%;"><tr><td><u>10 pounds</u></td></tr></table> Quantity of calcium chloride used (lbs.) <table border="1" style="width: 100%;"><tr><td> </td></tr></table> Volume of grout prepared (gal.) <table border="1" style="width: 100%;"><tr><td> </td></tr></table> Volume of grout used (gal.) <table border="1" style="width: 100%;"><tr><td><u>8 gal.</u></td></tr></table>	<u>1-8 FT</u>	<u>1</u>	<u>18</u>	<u>2 bags</u>	<u>Type I Portland</u>	<u>10 pounds</u>			<u>8 gal.</u>
<u>1-8 FT</u>									
<u>1</u>									
<u>18</u>									
<u>2 bags</u>									
<u>Type I Portland</u>									
<u>10 pounds</u>									
<u>8 gal.</u>									
<u>COMMENTS:</u> <u>Depth to water = 5.0 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u>	* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.								

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW48-3</u>																																																
Site Location: <u>SEAD-48</u>	Driller: <u>David Lion</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/21/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>10 ft.</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-7.3</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>7 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>10 ft.</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-7.3</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>7 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>10 ft.</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-7.3</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>7 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.85 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

MW48-4

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: SEAD-48	Well ID: MW48-4																																																
Site Location: Pitchblende Storage	Driller:																																																
Drilling Company: Geologic NS	Inspector:																																																
Date:																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td align="center">Pull</td></tr> <tr><td>Casing retrieved (feet)</td><td align="center">11 ft</td></tr> <tr><td>Casing type/dia. (in.)</td><td align="center">2" pvc</td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td align="center">7.3 ft</td></tr> <tr><td># of batches prepared</td><td align="center">1</td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td align="center">18 gal</td></tr> <tr><td>Quantity of cement used (lbs.)</td><td align="center">188 lbs</td></tr> <tr><td>Cement type</td><td align="center">Portland #1</td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td align="center">10 lbs</td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td></td></tr> </table>	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 employed	Pull	Casing retrieved (feet)	11 ft	Casing type/dia. (in.)	2" pvc	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	7.3 ft	# of batches prepared	1	<u>For each batch record:</u>		Quantity of water used (gal.)	18 gal	Quantity of cement used (lbs.)	188 lbs	Cement type	Portland #1	Quantity of bentonite used (lbs.)	10 lbs	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p>
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 employed	Pull																																																
Casing retrieved (feet)	11 ft																																																
Casing type/dia. (in.)	2" pvc																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	7.3 ft																																																
# of batches prepared	1																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	18 gal																																																
Quantity of cement used (lbs.)	188 lbs																																																
Cement type	Portland #1																																																
Quantity of bentonite used (lbs.)	10 lbs																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p>COMMENTS:</p> <p>put end cap, tremie grout, pull protective core TOP of well with core backfill, No water.</p>																																																	
<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>																																																	

Drilling Contractor

Department Representative

*Costly pulley
3 ballands & concrete pad with protective core*

MW 48-5

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: SEAD 48	Well ID: MW 48-5																																																
Site Location: Pitchblend Storage	Driller:																																																
Drilling Company:	Inspector:																																																
Date:																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td>pull</td></tr> <tr><td>Casing retrieved (feet)</td><td>15 ft</td></tr> <tr><td>Casing type/dia. (in.)</td><td>2" pvc</td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBS)</td><td>13 ft</td></tr> <tr><td># of batches prepared</td><td>1</td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td>18</td></tr> <tr><td>Quantity of cement used (lbs.)</td><td>188</td></tr> <tr><td>Cement type</td><td>portland #1</td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td>10 lbs</td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td></td></tr> </table>	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 employed	pull	Casing retrieved (feet)	15 ft	Casing type/dia. (in.)	2" pvc	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBS)	13 ft	# of batches prepared	1	<u>For each batch record:</u>		Quantity of water used (gal.)	18	Quantity of cement used (lbs.)	188	Cement type	portland #1	Quantity of bentonite used (lbs.)	10 lbs	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p>
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 employed	pull																																																
Casing retrieved (feet)	15 ft																																																
Casing type/dia. (in.)	2" pvc																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBS)	13 ft																																																
# of batches prepared	1																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	18																																																
Quantity of cement used (lbs.)	188																																																
Cement type	portland #1																																																
Quantity of bentonite used (lbs.)	10 lbs																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p>COMMENTS:</p> <p>knock off end cap remove grout pull casing top off grout backfill</p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor
**Pull casing
3 Bollards
1 protective cover & pad**

Department Representative
ES TD

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

WELL DECOMMISSIONING RECORD		
Site Name: SEAD 48	Well ID: MW-48-6	
Site Location: Pit/bleed Storage	Driller:	
Drilling Company: Geologic NS	Inspector:	
Date:		
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled <input type="checkbox"/> Drilling Method(s) <input type="checkbox"/> Borehole Dia. (in.) <input type="checkbox"/> Temporary Casing Installed? (y/n) <input type="checkbox"/> Depth temporary casing installed <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/> Method of installing <input type="checkbox"/>	Depth (feet) <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <hr style="width: 50px; border: 1px solid black;"/> <p align="center">2</p> <hr style="width: 50px; border: 1px solid black;"/> <p align="center">4</p> <hr style="width: 50px; border: 1px solid black;"/> <p align="center">6</p> <hr style="width: 50px; border: 1px solid black;"/> <p align="center">8</p> <hr style="width: 50px; border: 1px solid black;"/> <p align="center">12</p> </div> <div style="border-left: 1px solid black; border-right: 1px solid black; height: 200px; position: relative;"> <div style="position: absolute; top: 0; right: 0; font-size: 2em;">3ft</div> <div style="position: absolute; bottom: 0; right: 0; font-size: 2em;">11ft</div> </div> </div>	
<u>CASING PULLING</u> Method employed <input type="checkbox"/> pull Casing retrieved (feet) <input type="checkbox"/> 10ft Casing type/dia. (in.) <input type="checkbox"/> 2" PVC		
<u>CASE PERFORATING</u> Equipment used <input type="checkbox"/> Number of perforations/foot <input type="checkbox"/> Size of perforations <input type="checkbox"/> Interval perforated <input type="checkbox"/>		
<u>GROUTING</u> Interval grouted (FBLs) <input type="checkbox"/> 8ft # of batches prepared <input type="checkbox"/> 1 For each batch record: Quantity of water used (gal.) <input type="checkbox"/> 18 Quantity of cement used (lbs.) <input type="checkbox"/> 180 Cement type <input type="checkbox"/> Portland #1 Quantity of bentonite used (lbs.) <input type="checkbox"/> 10 lbs Quantity of calcium chloride used (lbs.) <input type="checkbox"/> Volume of grout prepared (gal.) <input type="checkbox"/> Volume of grout used (gal.) <input type="checkbox"/>		
COMMENTS: Perforate end cap - remove Grout pull PVC casing - top off grout pull cover & Bollards, Backfill with soil		
* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.		

Drilling Contractor

Department Representative

Casing pulled 11ft Recovered
 3 bollards & 1 protective casing & pad.

DD = 11.0
 Grub = 8
 WL = 5ft

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW48-7</u>																																																
Site Location: <u>SEAD-48</u>	Driller: <u>Joe Menze</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/22/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p>CASING PULLING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>6.7 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p>CASE PERFORATING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p>GROUTING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-9.3 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td>For each batch record:</td><td></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>9 gal.</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>6.7 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-9.3 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>9 gal.</u>	<p align="center">WELL SCHEMATIC*</p> <p>The schematic shows a vertical well shaft. At the top (0 feet), there is a 'stick up removed' of 2.1 feet. The total depth to the top of the well is 11.4 feet. The shaft is filled with 'Grout' and has a 'SCREEN BROKE OFF' at approximately 10 feet, which was 'Grouted in place'. The bottom of the well is marked as 'NOT DRILLED'.</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>6.7 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-9.3 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>9 gal.</u>																																																
<p>COMMENTS: <u>Depth to water = 7.71 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top. Next to side ED 708.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW48-8</u>																																																
Site Location: <u>SEAD-48</u>	Driller: <u>Joe Menzel</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/22/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>8ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FMLS)</td><td><u>1-6</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>5 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>8ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FMLS)	<u>1-6</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>5 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>8ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FMLS)	<u>1-6</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>5 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 6.39 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW 59-1</u>																																																
Site Location: <u>SEAD-59</u>	Driller: <u>David Lips</u>																																																
Drilling Company: <u>Geologic North star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>1/25/2011</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p>CASING PULLING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Knock, grout, pull, grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>9.3 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p>CASE PERFORATING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p>GROUTING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>0-7.3 ft</u></td></tr> <tr><td># of batches prepared</td><td></td></tr> <tr><td>For each batch record:</td><td></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td></td></tr> </table>	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 employed	<u>Knock, grout, pull, grout</u>	Casing retrieved (feet)	<u>9.3 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>0-7.3 ft</u>	# of batches prepared		For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10</p> <p>2' stickup Removed</p> <p>Pulled PVC well 2"</p> <p>Grout</p> <p>Top To TD: 9.3</p> <p>7.3</p> <p>Not Drilled</p>
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 employed	<u>Knock, grout, pull, grout</u>																																																
Casing retrieved (feet)	<u>9.3 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>0-7.3 ft</u>																																																
# of batches prepared																																																	
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p>COMMENTS: <u>Depth to water = 3.84 ft. from TC</u> <u>Knocked out end plug. Loaded casing with grout. Pulled casing. Recovered all. Topped off grout</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 59-2</u>																																																
Site Location: <u>SEAD 59</u>	Driller: <u>Steve Laramée</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/24/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>13.2 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-13.2</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>17</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>13.2 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-13.2</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>17</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Handwritten notes on schematic: - 1.7 ft Stick up removed - 13.2 ft TOP TO TD - Soil - PULLED PVC WELL - Grout - 11.5 Bottom of well - NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>13.2 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-13.2</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>17</u>																																																
<p>COMMENTS: <u>Depth to water = 6.96 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW59-4</u>	
Site Location: <u>SEAD 59</u>	Driller: <u>Joe Menzel</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>	
	Date: <u>9/23/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled <input type="checkbox"/> Drilling Method(s) <input type="checkbox"/> Borehole Dia. (in.) <input type="checkbox"/> Temporary Casing Installed? (y/n) <input type="checkbox"/> Depth temporary casing installed <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/> Method of installing <input type="checkbox"/>		
<u>CASING PULLING</u> Method employed <u>Grout, Pull, Grout</u> Casing retrieved (feet) <u>8.6 ft</u> Casing type/dia. (in.) <u>2" PVC</u>		
<u>CASE PERFORATING</u> Equipment used <input type="checkbox"/> Number of perforations/foot <input type="checkbox"/> Size of perforations <input type="checkbox"/> Interval perforated <input type="checkbox"/>		
<u>GROUTING</u> Interval grouted (FBLs) <u>1-7.1</u> # of batches prepared <u>1</u> For each batch record: Quantity of water used (gal.) <u>18</u> Quantity of cement used (lbs.) <u>2 bags</u> Cement type <u>Type I Portland</u> Quantity of bentonite used (lbs.) <u>10 pounds</u> Quantity of calcium chloride used (lbs.) <input type="checkbox"/> Volume of grout prepared (gal.) <input type="checkbox"/> Volume of grout used (gal.) <u>8 gal</u>		
COMMENTS: <u>Depth to water = 5.4 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u>		* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
 Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 59-7</u>
Site Location: <u>SEAD 59</u>	Driller: <u>Steve Laramée</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/24/10</u>
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p>OVERDRILLING</p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p>CASING PULLING</p> <p>Method employed <input type="text" value="Grout, Pull, Grout"/></p> <p>Casing retrieved (feet) <input type="text" value="14.7 ft"/></p> <p>Casing type/dia. (in.) <input pvc"="" type="text" value="2\"/></p> <p>CASE PERFORATING</p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p>GROUTING</p> <p>Interval grouted (FBLs) <input type="text" value="1-12 ft"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="18"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="2 bags"/></p> <p>Cement type <input type="text" value="Type I Portland"/></p> <p>Quantity of bentonite used (lbs.) <input type="text" value="10 pounds"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text" value="12 gal"/></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>2.7 ft stick up removed</p> <p>14.7 ft Top to TD</p> <p>Soil</p> <p>Grout</p> <p>PULLED PVC WELL</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
<p>COMMENTS: <u>Depth to water = 6.24 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star

Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 59-8</u>																																																
Site Location: <u>SEAD 59</u>	Driller: <u>Steve Laramée</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/24/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>13.4 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-13.4</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>13 gal.</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>13.4 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-13.4</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>13 gal.</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Annotations: <u>2.3</u> stick up removed; <u>13.40</u> Top TO TD; <u>Soil</u>; <u>Grout</u>; <u>Bottom of well</u>; <u>NOT DRILLED</u>; <u>PULLED PVC WELL</u></p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>13.4 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-13.4</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>13 gal.</u>																																																
<p>COMMENTS: <u>Depth to water = 7.24 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star

Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW63-1</u>																																																
Site Location: <u>SEAM 63</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/14/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td style="height: 20px;"></td></tr> <tr><td>Drilling Method(s)</td><td style="height: 20px;"></td></tr> <tr><td>Borehole Dia. (in.)</td><td style="height: 20px;"></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td style="height: 20px;"></td></tr> <tr><td>Depth temporary casing installed</td><td style="height: 20px;"></td></tr> <tr><td>Casing type/dia. (in.)</td><td style="height: 20px;"></td></tr> <tr><td>Method of installing</td><td style="height: 20px;"></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td style="height: 20px;"><u>Grout, pull, grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td style="height: 20px;"><u>10 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td style="height: 20px;"><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td style="height: 20px;"></td></tr> <tr><td>Number of perforations/foot</td><td style="height: 20px;"></td></tr> <tr><td>Size of perforations</td><td style="height: 20px;"></td></tr> <tr><td>Interval perforated</td><td style="height: 20px;"></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBS)</td><td style="height: 20px;"><u>1-8.8'</u></td></tr> <tr><td># of batches prepared</td><td style="height: 20px;"><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td style="height: 20px;"><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td style="height: 20px;"><u>2 bags</u></td></tr> <tr><td>Cement type</td><td style="height: 20px;"><u>Type 1</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td style="height: 20px;"><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td style="height: 20px;"></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td style="height: 20px;"></td></tr> <tr><td>Volume of grout used (gal.)</td><td style="height: 20px;"><u>9 gal.</u></td></tr> </table>	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 employed	<u>Grout, pull, grout</u>	Casing retrieved (feet)	<u>10 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBS)	<u>1-8.8'</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>9 gal.</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>1.2' stickup removed</p> <p>10' TOP TO TD</p> <p>Grout</p> <p>Pulled PVC well casing</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
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 employed	<u>Grout, pull, grout</u>																																																
Casing retrieved (feet)	<u>10 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBS)	<u>1-8.8'</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>9 gal.</u>																																																
<p>COMMENTS: <u>Depth to water = 8.4 from TOC</u> <u>Knock off end plug. Filled casing with grout.</u> <u>Pulled casing. Filled remaining hole with</u> <u>Grout. Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW63-2</u>
Site Location: <u>SEAD 63</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
Date: <u>9/14/10</u>	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="text"/></p> <p>Drilling Method(s) <input type="text"/></p> <p>Borehole Dia. (in.) <input type="text"/></p> <p>Temporary Casing Installed? (y/n) <input type="text"/></p> <p>Depth temporary casing installed <input type="text"/></p> <p>Casing type/dia. (in.) <input type="text"/></p> <p>Method of installing <input type="text"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="text" value="grout pull, gravel"/></p> <p>Casing retrieved (feet) <input type="text" value="9.6'"/></p> <p>Casing type/dia. (in.) <input type="text" value="2\"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="text"/></p> <p>Number of perforations/foot <input type="text"/></p> <p>Size of perforations <input type="text"/></p> <p>Interval perforated <input type="text"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="text" value="1-7.5'"/></p> <p># of batches prepared <input type="text" value="1"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="text" value="18"/></p> <p>Quantity of cement used (lbs.) <input type="text" value="2 bags"/></p> <p>Cement type <input type="text" value="Type 1"/></p> <p>Quantity of bentonite used (lbs.) <input type="text" value="10"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="text"/></p> <p>Volume of grout prepared (gal.) <input type="text"/></p> <p>Volume of grout used (gal.) <input type="text" value="8 gal."/></p>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p>
<p>COMMENTS: <u>depth to water from Tac = 7.0'</u> <u>Knocked off end cap, loaded casing full of grout.</u> <u>Pulled casing. Filled remaining hole with grout.</u> <u>Added silt on top of grout.</u></p>	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW63-3</u>	
Site Location: <u>SEAD 63</u>	Driller: <u>Scott Breeds</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>	
	Date: <u>9/14/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled <input type="checkbox"/> Drilling Method(s) <input type="checkbox"/> Borehole Dia. (in.) <input type="checkbox"/> Temporary Casing Installed? (y/n) <input type="checkbox"/> Depth temporary casing installed <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/> Method of installing <input type="checkbox"/>		
<u>CASING PULLING</u> Method employed <u>Grout Pull Grout</u> Casing retrieved (feet) <u>9.5'</u> Casing type/dia. (in.) <u>2" PVC</u>		
<u>CASE PERFORATING</u> Equipment used <input type="checkbox"/> Number of perforations/foot <input type="checkbox"/> Size of perforations <input type="checkbox"/> Interval perforated <input type="checkbox"/>		
<u>GROUTING</u> Interval grouted (FBLS) <u>1-9.5</u> # of batches prepared <u>1</u> For each batch record: Quantity of water used (gal.) <u>18</u> Quantity of cement used (lbs.) <u>2 bags</u> Cement type <u>Type 1</u> Quantity of bentonite used (lbs.) <u>10 pounds</u> Quantity of calcium chloride used (lbs.) <input type="checkbox"/> Volume of grout prepared (gal.) <input type="checkbox"/> Volume of grout used (gal.) <u>10</u>		
COMMENTS: <u>Depth to water 6.96 from TOC</u> <u>Knocked off end plug. Filled casing with grout.</u> <u>Pulled casing. Filled remaining hole with</u> <u>grout. Added soil to ground level</u>		

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW67-1</u>																																																
Site Location: <u>SEAD 67</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/16/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>13 FT</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-11.5 FT</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>12 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>13 FT</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-11.5 FT</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>12 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Labels: 1.8" Stick up Removed, 13' TOP TO TD, Soil, PULLED PVC WELL, Grout, Bottom of Well, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>13 FT</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-11.5 FT</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>12 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.18 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW67-2</u>																																																
Site Location: <u>SEAD 67</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/16/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>12.7 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-12'</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>12</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>12.7 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-12'</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>12</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>0.9" Stick up Removed</p> <p>12.9" Top TO TD</p> <p>Soil</p> <p>PULLED PVC WELL</p> <p>Grout</p> <p>Bottom of Well</p> <p>NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>12.7 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-12'</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>12</u>																																																
<p>COMMENTS: <u>Depth to water = 5.62 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 67-3</u>																																																
Site Location: <u>SEAD 67</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/1/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>13 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-11.5 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>12 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>13 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-11.5 ft</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>12 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>1.5' Stick up Removed</p> <p>13' Top to TD</p> <p>Soil</p> <p>PULLED PVC WELL</p> <p>Grout</p> <p>Bottom of well</p> <p>NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>13 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-11.5 ft</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>12 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 5.9 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 70-1</u>																																																
Site Location: <u>SEAD 70</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
	Date: <u>9/16/10</u>																																																
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>11.8 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLS)</td><td><u>1-10.5</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>11 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>11.8 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLS)	<u>1-10.5</u>	# of batches prepared	<u>1</u>	For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>11 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Labels: Stick up Removed, PULLED PVC WELL, Grout, Top TO TD, Soil, Bottom of well, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>11.8 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLS)	<u>1-10.5</u>																																																
# of batches prepared	<u>1</u>																																																
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>11 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.3 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MD 70-3</u>
Site Location: <u>SEAD 70</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/16/10</u>

DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="checkbox"/></p> <p>Casing retrieved (feet) <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="checkbox"/></p> <p># of batches prepared <input type="checkbox"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/></p> <p>Cement type <input type="checkbox"/></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/></p>	<p style="text-align: right;">stickup gone →</p> <p style="text-align: center;">0</p> <hr style="width: 80%; margin: 0 auto;"/> <p style="text-align: center;">5</p> <hr style="width: 80%; margin: 0 auto;"/> <p style="text-align: center;">No casing found →</p>

COMMENTS: Well abandoned previously?
Broken pad concrete at location. Both rods
were removed prev? Dug down and did not
find well casing. Topped off hole with grout.

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
 Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW70-4</u>
Site Location: <u>SEAD 70</u>	Driller: <u>Scott Breeds</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/16/10</u>
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p><u>OVERDRILLING</u></p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p><u>CASING PULLING</u></p> <p>Method employed <input type="checkbox"/> <u>GROUT, PULL, GROUT</u></p> <p>Casing retrieved (feet) <input type="checkbox"/> <u>11.4 ft</u></p> <p>Casing type/dia. (in.) <input type="checkbox"/> <u>2" PVC</u></p> <p><u>CASE PERFORATING</u></p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p><u>GROUTING</u></p> <p>Interval grouted (FBLs) <input type="checkbox"/> <u>1-10</u></p> <p># of batches prepared <input type="checkbox"/> <u>1</u></p> <p><u>For each batch record:</u></p> <p>Quantity of water used (gal.) <input type="checkbox"/> <u>18</u></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/> <u>2 bags</u></p> <p>Cement type <input type="checkbox"/> <u>Type I Portland</u></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/> <u>10 pounds</u></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/> <u>10</u></p>	<p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p>
<p>COMMENTS: <u>Depth to water = Dry ft from TOC</u></p> <p><u>Knocked out end cap. Loaded casing with grout.</u></p> <p><u>Pulled casing. Grouted remaining borehole.</u></p> <p><u>Added soil on top.</u></p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

Department Representative

Handwritten mark

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 71-1</u>
Site Location: <u>SEAD 71</u>	Driller: <u>Steve Laramée</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/24/10</u>
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<u>OVERDRILLING</u> Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing	
<u>CASING PULLING</u> Method employed Casing retrieved (feet) Casing type/dia. (in.)	
<u>CASE PERFORATING</u> Equipment used Number of perforations/foot Size of perforations Interval perforated	
<u>GROUTING</u> Interval grouted (FBS) # 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.)	
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 employed Casing retrieved (feet) Casing type/dia. (in.)	
Equipment used Number of perforations/foot Size of perforations Interval perforated	
Interval grouted (FBS) # 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.)	
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 employed Casing retrieved (feet) Casing type/dia. (in.)	

COMMENTS: Depth to water = ft from TOC
 Knocked out end cap. Loaded casing with grout.
 Pulled casing. Grouted remaining borehole.
 Added soil on top. Wouldn't pull. Well grouted in place.

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
 Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 71-2</u>
Site Location: <u>SEAD 71</u>	Driller: <u>Steve Laramee</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/24/10</u>
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<u>OVERDRILLING</u> Interval Drilled Drilling Method(s) Borehole Dia. (in.) Temporary Casing Installed? (y/n) Depth temporary casing installed Casing type/dia. (in.) Method of installing	
<u>CASING PULLING</u> Method employed Casing retrieved (feet) Casing type/dia. (in.)	
<u>CASE PERFORATING</u> Equipment used Number of perforations/foot Size of perforations Interval perforated	
<u>GROUTING</u> 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.)	
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 employed Casing retrieved (feet) Casing type/dia. (in.)	
Equipment used Number of perforations/foot Size of perforations Interval perforated	
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.)	
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 employed Casing retrieved (feet) Casing type/dia. (in.)	
Equipment used Number of perforations/foot Size of perforations Interval perforated	
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 = ft from TOC
 Knocked out end cap. Loaded casing with grout.
 Pulled casing. Grouted remaining borehole.
 Added soil on top. Left curb box in place.

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
 Drilling Contractor

 Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW71-3</u>																																																
Site Location: <u>SEAD-71</u>	Driller: <u>David Lyons</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>1/25/2011</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Knock, grout, pull, grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>7.6'</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>0-6.1</u></td></tr> <tr><td># of batches prepared</td><td> </td></tr> <tr><td>For each batch record:</td><td> </td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td> </td></tr> </table>	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 employed	<u>Knock, grout, pull, grout</u>	Casing retrieved (feet)	<u>7.6'</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>0-6.1</u>	# of batches prepared		For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Knock, grout, pull, grout</u>																																																
Casing retrieved (feet)	<u>7.6'</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>0-6.1</u>																																																
# of batches prepared																																																	
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p><u>COMMENTS:</u> <u>Depth to water = 7.28' ft. from TC</u> <u>Knocked out end plug. Loaded casing with</u> <u>grout. Pulled casing. Recovered all. Topped</u> <u>off grout to surface.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 71-4</u>
Site Location: <u>SEAD T1</u>	Driller: <u>Steve Laramée</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/24/10</u>
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*
<p>OVERDRILLING</p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p>CASING PULLING</p> <p>Method employed <input type="checkbox"/></p> <p>Casing retrieved (feet) <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>CASE PERFORATING</p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p>GROUTING</p> <p>Interval grouted (FBLs) <input type="checkbox"/></p> <p># of batches prepared <input type="checkbox"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/></p> <p>Cement type <input type="checkbox"/></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/></p>	
<p>OVERDRILLING</p> <p>Interval Drilled <input type="checkbox"/></p> <p>Drilling Method(s) <input type="checkbox"/></p> <p>Borehole Dia. (in.) <input type="checkbox"/></p> <p>Temporary Casing Installed? (y/n) <input type="checkbox"/></p> <p>Depth temporary casing installed <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>Method of installing <input type="checkbox"/></p> <p>CASING PULLING</p> <p>Method employed <input type="checkbox"/></p> <p>Casing retrieved (feet) <input type="checkbox"/></p> <p>Casing type/dia. (in.) <input type="checkbox"/></p> <p>CASE PERFORATING</p> <p>Equipment used <input type="checkbox"/></p> <p>Number of perforations/foot <input type="checkbox"/></p> <p>Size of perforations <input type="checkbox"/></p> <p>Interval perforated <input type="checkbox"/></p> <p>GROUTING</p> <p>Interval grouted (FBLs) <input type="checkbox"/></p> <p># of batches prepared <input type="checkbox"/></p> <p>For each batch record:</p> <p>Quantity of water used (gal.) <input type="checkbox"/></p> <p>Quantity of cement used (lbs.) <input type="checkbox"/></p> <p>Cement type <input type="checkbox"/></p> <p>Quantity of bentonite used (lbs.) <input type="checkbox"/></p> <p>Quantity of calcium chloride used (lbs.) <input type="checkbox"/></p> <p>Volume of grout prepared (gal.) <input type="checkbox"/></p> <p>Volume of grout used (gal.) <input type="checkbox"/></p>	<p>Depth (feet)</p> <p>0</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>2.2 ft stick up removed</p> <p>Grout Filled</p> <p>PULLED PVC WELL</p> <p>20.9 ft TOP TO TD</p> <p>Soil</p> <p>Piece of casing secured</p> <p>Grout</p> <p>broke off wedged in hole</p> <p>Grout</p> <p>Bottom of Well</p> <p>12.7</p> <p>NOT DRILLED</p>
<p>COMMENTS: Depth to water = 12.80 ft from TOC Knocked out end cap. Loaded casing with grout. Pulled casing. Grouted remaining borehole. Added soil on top. Bottom 5 ft of screen broke off.</p>	<p>* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>

Geologic North Star
Drilling Contractor

wedged in hole. Added grout through screen. Grouted in place. Above water table.

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MJ119-1</u>																																																
Site Location: <u>SEAD 119</u>	Driller: <u>David Lions</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
	Date: <u>1/27/2011</u>																																																
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Knock, crant, pull, grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBS)</td><td><u>0-19 ft</u></td></tr> <tr><td># of batches prepared</td><td></td></tr> <tr><td>For each batch record:</td><td></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td></td></tr> </table>	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 employed	<u>Knock, crant, pull, grout</u>	Casing retrieved (feet)		Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBS)	<u>0-19 ft</u>	# of batches prepared		For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20</p> <p>Well Structure: 2.5' stickup removed, 2" PVC casing, Grout, NOT Drilled</p> <p>TOP TO TD: 21.5</p>
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 employed	<u>Knock, crant, pull, grout</u>																																																
Casing retrieved (feet)																																																	
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBS)	<u>0-19 ft</u>																																																
# of batches prepared																																																	
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p>COMMENTS: <u>Depth to water = 3.5 est ft from TD</u> <u>Knocked out end plug. Loaded casing with grout. Pulled casing - topped off grout soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW 119-2</u>																																																
Site Location: <u>SEAD-119</u>	Driller: <u>David Lopez</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Hillman</u>																																																
Date: <u>1/27/2011</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>knock, grout, pull grout.</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>21.25'</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>0-19 ft</u></td></tr> <tr><td># of batches prepared</td><td></td></tr> <tr><td>For each batch record:</td><td></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td></td></tr> </table>	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 employed	<u>knock, grout, pull grout.</u>	Casing retrieved (feet)	<u>21.25'</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>0-19 ft</u>	# of batches prepared		For each batch record:		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)		<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>knock, grout, pull grout.</u>																																																
Casing retrieved (feet)	<u>21.25'</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>0-19 ft</u>																																																
# of batches prepared																																																	
For each batch record:																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)																																																	
<p><u>COMMENTS:</u> <u>Depth to water = 385 ft. final</u> <u>Knocked out end plug. Loaded casing with</u> <u>grout. Pulled casing. Recovered all. Tapped</u> <u>off hole with grout.</u></p>																																																	

* Sketch in all relevant decommissioning data, including interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD	
Site Name: <u>SENECA ARMY DEPOT</u>	Well ID: <u>MW 119-3</u>
Site Location: <u>SEAD-119</u>	Driller: <u>David Lyons</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Hillman</u>
Date: <u>1/26/2011</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC* 2 ft
<u>OVERDRILLING</u>	<div style="display: flex; justify-content: space-between;"> <div style="width: 15%;"> <p>Depth (feet)</p> <p><u>0</u></p> <p><u>5</u></p> <p><u>10</u></p> <p><u>15</u></p> <p><u>20</u></p> </div> <div style="width: 60%; border-left: 1px solid black; border-right: 1px solid black; position: relative;"> <p style="position: absolute; top: -20px; left: 50%; transform: translate(-50%, -50%);">stickup Removed</p> <p style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);">Pulled 2" PVC Casing</p> </div> <div style="width: 15%; border-left: 1px solid black; border-right: 1px solid black; position: relative;"> <p style="position: absolute; top: -20px; right: 0;">TOP TO TD</p> <p style="position: absolute; top: 20%; right: 0;">16.1</p> <p style="position: absolute; top: 40%; right: 0;">Grout</p> <p style="position: absolute; top: 60%; right: 0;">14.1 ft</p> <p style="position: absolute; top: 80%; right: 0;">NOT DRILLED</p> </div> </div>
Interval Drilled	
Drilling Method(s)	
Borehole Dia. (in.)	
Temporary Casing Installed? (y/n)	
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	
<u>CASING PULLING</u>	
Method employed	
Casing retrieved (feet)	
Casing type/dia. (in.)	
<u>CASE PERFORATING</u>	
Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	
<u>GROUTING</u>	
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: <u>Depth to water = 3.41 ft. from TC</u> <u>Knocked out end plug. Loaded casing with</u> <u>grout. Pulled casing. Recovered all casing.</u> <u>Topped off grout.</u>	* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12/C-3</u>																																																
Site Location: <u>SEAD 121 E</u>	Driller: <u>Scott Breeds</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/23/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td> </td></tr> <tr><td>Drilling Method(s)</td><td> </td></tr> <tr><td>Borehole Dia. (in.)</td><td> </td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td> </td></tr> <tr><td>Depth temporary casing installed</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td> </td></tr> <tr><td>Method of installing</td><td> </td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td> </td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td> </td></tr> <tr><td>Number of perforations/foot</td><td> </td></tr> <tr><td>Size of perforations</td><td> </td></tr> <tr><td>Interval perforated</td><td> </td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-9.1</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type 1 Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td> </td></tr> <tr><td>Volume of grout prepared (gal.)</td><td> </td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>9 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)		Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-9.1</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type 1 Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>9 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>Labels: Stick up Removed, PULLED PVC WELL, Grout, Soil, Top TO TD, Bottom of Well, NOT DRILLED</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)																																																	
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-9.1</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type 1 Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>9 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.90 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 12/C-4</u>	
Site Location: <u>SEAD 12PC</u>	Driller: <u>Joe Menzel</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>	
	Date: <u>9/22/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled _____ Drilling Method(s) _____ Borehole Dia. (in.) _____ Temporary Casing Installed? (y/n) _____ Depth temporary casing installed _____ Casing type/dia. (in.) _____ Method of installing _____		
<u>CASING PULLING</u> Method employed <u>Grout, Pull, Grout</u> Casing retrieved (feet) <u>9.64 ft</u> Casing type/dia. (in.) <u>2" PVC</u>		
<u>CASE PERFORATING</u> Equipment used _____ Number of perforations/foot _____ Size of perforations _____ Interval perforated _____		
<u>GROUTING</u> Interval grouted (FBLs) <u>1-8.2 ft</u> # of batches prepared <u>1</u> <u>For each batch record:</u> Quantity of water used (gal.) <u>18</u> Quantity of cement used (lbs.) <u>2 bags</u> Cement type <u>Type 1 Portland</u> Quantity of bentonite used (lbs.) <u>10 pounds</u> Quantity of calcium chloride used (lbs.) _____ Volume of grout prepared (gal.) _____ Volume of grout used (gal.) <u>8 gal</u>		
		0
		5
		10
		15
		20
		25
	30	
COMMENTS: <u>Depth to water = 4.46 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u>	* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.	

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD		
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12/C-5</u>	
Site Location: <u>SEAD-12/C</u>	Driller: <u>Joe Menzel</u>	
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>	
	Date: <u>9/22/10</u>	
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*	
<u>OVERDRILLING</u> Interval Drilled <input type="checkbox"/> Drilling Method(s) <input type="checkbox"/> Borehole Dia. (in.) <input type="checkbox"/> Temporary Casing Installed? (y/n) <input type="checkbox"/> Depth temporary casing installed <input type="checkbox"/> Casing type/dia. (in.) <input type="checkbox"/> Method of installing <input type="checkbox"/>	<p style="font-size: small;">* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.</p>	
<u>CASING PULLING</u> Method employed <u>Grout, Pull, Grout</u> Casing retrieved (feet) <u>10.2 ft</u> Casing type/dia. (in.) <u>2" PVC</u>		
<u>CASE PERFORATING</u> Equipment used <input type="checkbox"/> Number of perforations/foot <input type="checkbox"/> Size of perforations <input type="checkbox"/> Interval perforated <input type="checkbox"/>		
<u>GROUTING</u> Interval grouted (FBLS) <u>1-8.7ft</u> # of batches prepared <u>1</u> For each batch record: Quantity of water used (gal.) <u>18</u> Quantity of cement used (lbs.) <u>2 bags</u> Cement type <u>Type I Portland</u> Quantity of bentonite used (lbs.) <u>10 pounds</u> Quantity of calcium chloride used (lbs.) <input type="checkbox"/> Volume of grout prepared (gal.) <input type="checkbox"/> Volume of grout used (gal.) <u>9 gal</u>		
COMMENTS: <u>Depth to water = NA ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u>		

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD

Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW12/C-6</u>
Site Location: <u>SEAD 1212</u>	Driller: <u>Joe Menzel</u>
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>
	Date: <u>9/22/10</u>

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

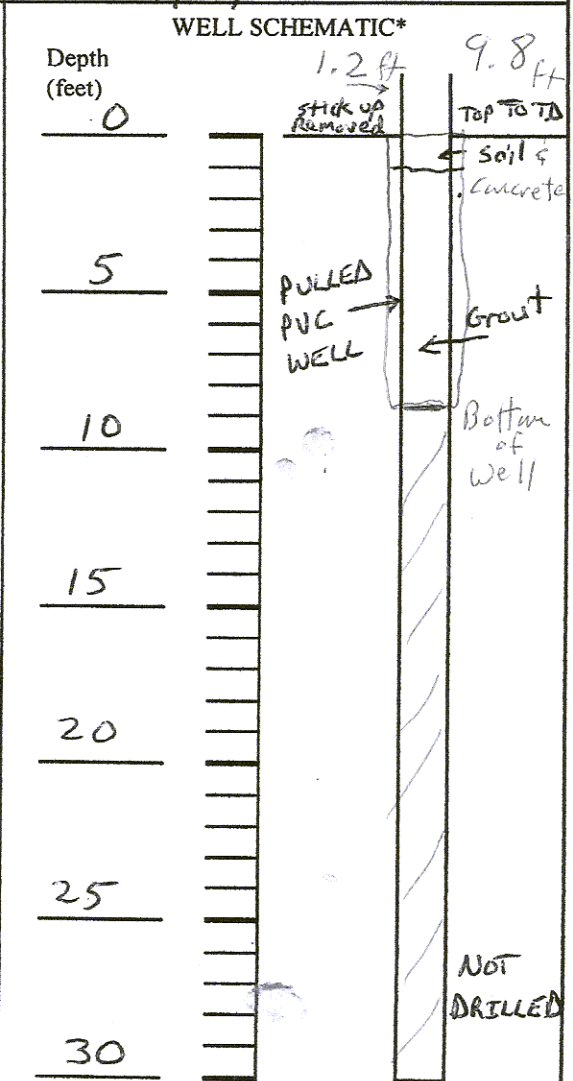
Method employed	<u>GROUT, Pull, GROUT</u>
Casing retrieved (feet)	<u>9.8 FT</u>
Casing type/dia. (in.)	<u>2" PVC</u>

CASE PERFORATING

Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	

GROUTING

Interval grouted (FBLs)	<u>1-9.8</u>
# of batches prepared	<u>1</u>
For each batch record:	
Quantity of water used (gal.)	<u>18</u>
Quantity of cement used (lbs.)	<u>2 bags</u>
Cement type	<u>Type I Portland</u>
Quantity of bentonite used (lbs.)	<u>10 pounds</u>
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	<u>9 gal</u>



COMMENTS: Depth to water = 6.86? Ft from TOC
Knocked out end cap. Loaded casing with grout.
Pulled casing. Grouted remaining borehole.
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

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 122B-1</u>																																																
Site Location: <u>SEAD 122B</u>	Driller: <u>Steve Laramée</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/24/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>10 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLs)</td><td><u>1-16.4 ft</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>16 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>10 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLs)	<u>1-16.4 ft</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>16 gal</u>	<p align="center">WELL SCHEMATIC*</p> <p>Depth (feet): 0, 5, 10, 15, 20, 25, 30</p> <p>18.3 ft Total Depth</p> <p>1.9 ft Stick up Removed</p> <p>16.9 ft Bottom of well</p> <p>NOT DRILLED (below 16.9 ft)</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>10 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLs)	<u>1-16.4 ft</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>16 gal</u>																																																
<p><u>COMMENTS: Depth to water = 8.35 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top. Screen broke off in hole.</u> <u>Grouted in place.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD																																																	
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW 122B-2</u>																																																
Site Location: <u>SEAD 122B</u>	Driller: <u>Steve Laramée</u>																																																
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>																																																
Date: <u>9/24/10</u>																																																	
<p align="center">DECOMMISSIONING DATA (Fill in all that apply)</p> <p><u>OVERDRILLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval Drilled</td><td></td></tr> <tr><td>Drilling Method(s)</td><td></td></tr> <tr><td>Borehole Dia. (in.)</td><td></td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td></td></tr> <tr><td>Depth temporary casing installed</td><td></td></tr> <tr><td>Casing type/dia. (in.)</td><td></td></tr> <tr><td>Method of installing</td><td></td></tr> </table> <p><u>CASING PULLING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Method employed</td><td><u>Grout, Pull, Grout</u></td></tr> <tr><td>Casing retrieved (feet)</td><td><u>17.9 ft</u></td></tr> <tr><td>Casing type/dia. (in.)</td><td><u>2" PVC</u></td></tr> </table> <p><u>CASE PERFORATING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Equipment used</td><td></td></tr> <tr><td>Number of perforations/foot</td><td></td></tr> <tr><td>Size of perforations</td><td></td></tr> <tr><td>Interval perforated</td><td></td></tr> </table> <p><u>GROUTING</u></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Interval grouted (FBLS)</td><td><u>1-16</u></td></tr> <tr><td># of batches prepared</td><td><u>1</u></td></tr> <tr><td colspan="2"><u>For each batch record:</u></td></tr> <tr><td>Quantity of water used (gal.)</td><td><u>18</u></td></tr> <tr><td>Quantity of cement used (lbs.)</td><td><u>2 bags</u></td></tr> <tr><td>Cement type</td><td><u>Type I Portland</u></td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td><u>10 pounds</u></td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td></td></tr> <tr><td>Volume of grout prepared (gal.)</td><td></td></tr> <tr><td>Volume of grout used (gal.)</td><td><u>8 gal</u></td></tr> </table>	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 employed	<u>Grout, Pull, Grout</u>	Casing retrieved (feet)	<u>17.9 ft</u>	Casing type/dia. (in.)	<u>2" PVC</u>	Equipment used		Number of perforations/foot		Size of perforations		Interval perforated		Interval grouted (FBLS)	<u>1-16</u>	# of batches prepared	<u>1</u>	<u>For each batch record:</u>		Quantity of water used (gal.)	<u>18</u>	Quantity of cement used (lbs.)	<u>2 bags</u>	Cement type	<u>Type I Portland</u>	Quantity of bentonite used (lbs.)	<u>10 pounds</u>	Quantity of calcium chloride used (lbs.)		Volume of grout prepared (gal.)		Volume of grout used (gal.)	<u>8 gal</u>	<p align="center">WELL SCHEMATIC*</p>
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 employed	<u>Grout, Pull, Grout</u>																																																
Casing retrieved (feet)	<u>17.9 ft</u>																																																
Casing type/dia. (in.)	<u>2" PVC</u>																																																
Equipment used																																																	
Number of perforations/foot																																																	
Size of perforations																																																	
Interval perforated																																																	
Interval grouted (FBLS)	<u>1-16</u>																																																
# of batches prepared	<u>1</u>																																																
<u>For each batch record:</u>																																																	
Quantity of water used (gal.)	<u>18</u>																																																
Quantity of cement used (lbs.)	<u>2 bags</u>																																																
Cement type	<u>Type I Portland</u>																																																
Quantity of bentonite used (lbs.)	<u>10 pounds</u>																																																
Quantity of calcium chloride used (lbs.)																																																	
Volume of grout prepared (gal.)																																																	
Volume of grout used (gal.)	<u>8 gal</u>																																																
<p>COMMENTS: <u>Depth to water = 7.73 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u></p>																																																	

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative

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

WELL DECOMMISSIONING RECORD									
Site Name: <u>Seneca Army Depot</u>	Well ID: <u>MW/22B-3</u>								
Site Location: <u>SEAD 122B</u>	Driller: <u>Steve Laramée</u>								
Drilling Company: <u>Geologic North Star</u>	Inspector: <u>Scott Dillman</u>								
	Date: <u>9/24/10</u>								
DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*								
<u>OVERDRILLING</u> Interval Drilled <table border="1" style="width: 100%; height: 40px;"><tr><td> </td></tr></table> Drilling Method(s) <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table> Borehole Dia. (in.) <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table> Temporary Casing Installed? (y/n) <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table> Depth temporary casing installed <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table> Casing type/dia. (in.) <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table> Method of installing <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table>									
<u>CASING PULLING</u> Method employed <table border="1" style="width: 100%; height: 20px;"><tr><td><u>GROUT, PUL, GROUT</u></td></tr></table> Casing retrieved (feet) <table border="1" style="width: 100%; height: 20px;"><tr><td><u>16.4 ft</u></td></tr></table> Casing type/dia. (in.) <table border="1" style="width: 100%; height: 20px;"><tr><td><u>2" PVC</u></td></tr></table>	<u>GROUT, PUL, GROUT</u>	<u>16.4 ft</u>	<u>2" PVC</u>						
<u>GROUT, PUL, GROUT</u>									
<u>16.4 ft</u>									
<u>2" PVC</u>									
<u>CASE PERFORATING</u> Equipment used <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table> Number of perforations/foot <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table> Size of perforations <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table> Interval perforated <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table>									
<u>GROUTING</u> Interval grouted (FBLs) <table border="1" style="width: 100%; height: 20px;"><tr><td><u>1-16.4 ft</u></td></tr></table> # of batches prepared <table border="1" style="width: 100%; height: 20px;"><tr><td><u>1</u></td></tr></table> For each batch record: Quantity of water used (gal.) <table border="1" style="width: 100%; height: 20px;"><tr><td><u>18</u></td></tr></table> Quantity of cement used (lbs.) <table border="1" style="width: 100%; height: 20px;"><tr><td><u>2 bags</u></td></tr></table> Cement type <table border="1" style="width: 100%; height: 20px;"><tr><td><u>Type I Portland</u></td></tr></table> Quantity of bentonite used (lbs.) <table border="1" style="width: 100%; height: 20px;"><tr><td><u>10 pounds</u></td></tr></table> Quantity of calcium chloride used (lbs.) <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table> Volume of grout prepared (gal.) <table border="1" style="width: 100%; height: 20px;"><tr><td> </td></tr></table> Volume of grout used (gal.) <table border="1" style="width: 100%; height: 20px;"><tr><td><u>8 gal.</u></td></tr></table>	<u>1-16.4 ft</u>	<u>1</u>	<u>18</u>	<u>2 bags</u>	<u>Type I Portland</u>	<u>10 pounds</u>			<u>8 gal.</u>
<u>1-16.4 ft</u>									
<u>1</u>									
<u>18</u>									
<u>2 bags</u>									
<u>Type I Portland</u>									
<u>10 pounds</u>									
<u>8 gal.</u>									
COMMENTS: <u>Depth to water = 6.64 ft from TOC</u> <u>Knocked out end cap. Loaded casing with grout.</u> <u>Pulled casing. Grouted remaining borehole.</u> <u>Added soil on top.</u>									

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Geologic North Star
Drilling Contractor

Department Representative